PHANTOMS OF ANGLO-CONFEDERATE COMMERCE : AN HISTORICAL AND ARCHAEOLOGICAL INVESTIGATION OF AMERICAN CIVIL WAR BLOCKADE RUNNING

Gordon P. Watts

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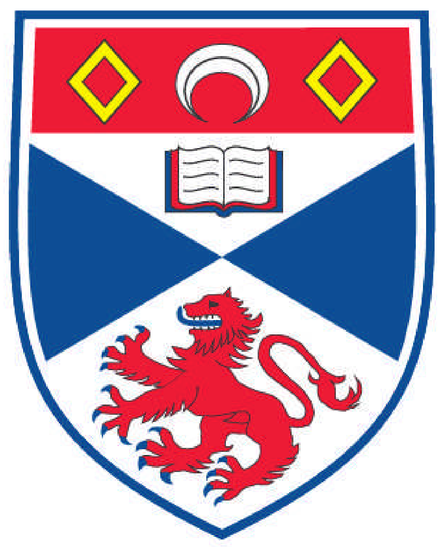

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Phantoms of Anglo-Confederate Commerce: an Historical and Archaeological Investigation of American Civil War Blockade Running

A thesis presented to the University of St. Andrews
in fulfilment of the requirements for the degree
Doctor of Philosophy

by
Gordon P. Watts, Jr.

12 July 1997

CONTAINS

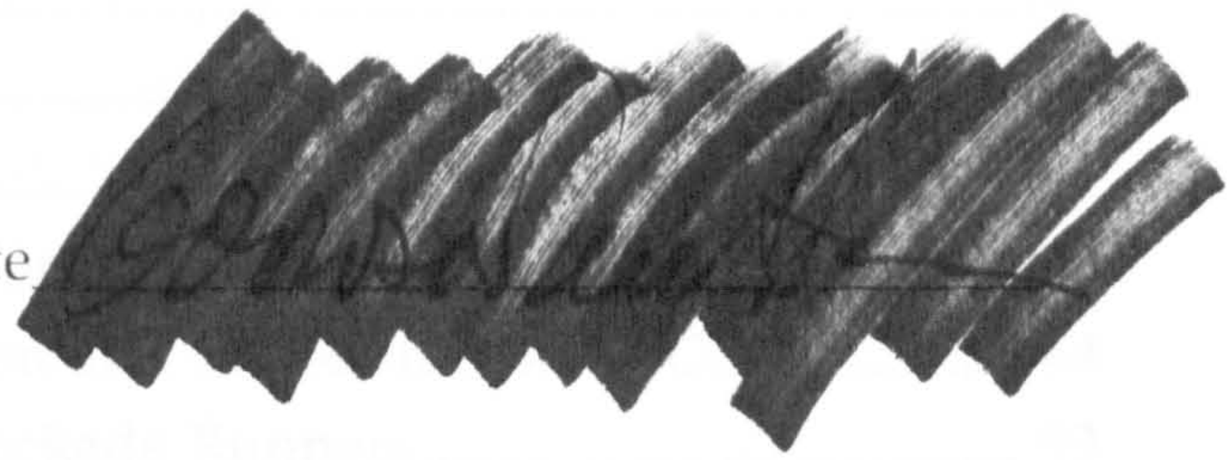
PULLOUTS

Abstract

During the American Civil War Wilmington, North Carolina and the Bermudian ports of St. Georges and Hamilton served as vital links in a complex trading network that developed to facilitate the exchange of southern agricultural products for war materials and civilian merchandise through a Union blockade of the Confederacy. Although that material contributed significantly to the Confederate war effort, Anglo-Confederate blockade running has received limited scholarly attention. Much of the associated literature is based on memoirs rather than scholarship and does not accurately reflect that necessarily clandestine trade. The primary goal of this thesis is to produce a more comprehensive and detailed picture of blockade running, the cargoes carried through the Union blockade and the powerful steam vessels that made Anglo-Confederate commerce possible. Unlike previous treatments, this thesis combines the results of both archival and archaeological research. The results illustrate the evolution of strategies involved in both establishing and maintaining the blockade and those developed for running the blockade. Assessment of the vessel remains and historical data associated with the construction and procurement of steamers identifies the vessel types and confirms that blockade runners adapted extant technology. Contrary to the popularly held impression, no technological innovations were specifically developed to address the demands of the trade. The spatial distribution of wrecks and the minimal amount of cultural material surviving in association with them provides strong evidence that cargoes were more valuable than the vessels. That premise influenced the strategy adopted by blockade runners. While Confederate salvors left little evidence of cargo, historical research revealed a wealth of new insight into the specific nature of that material. This new evidence provides a more accurate and detailed picture of Anglo-Confederate blockade running and the strategies, ships and cargoes that made blockade running between Wilmington and Bermuda a success.

Declarations

I, Gordon P. Watts, Jr., hereby certify that this thesis, which is approximately 100,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

Date 12 July 97 Signature of Candidate 

I was admitted as a research student under Ordinance No. 12 in October 1984 and as a candidate for the degree of Ph.D. on 30 November 1987: the higher study for which this is a record was carried out in the University of St. Andrews between 1987 and 1996.

Date 12 July 97 Signature of Candidate 

I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of Ph.D. in the University of St. Andrews and that the candidate is qualified to submit this thesis in application for that degree.

Date_____ Signature of Supervisor_____

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Acknowledgments

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During the years of research that supported development of the document I received critical assistance from the staff of numerous libraries, archival repositories, museums and government facilities. In Great Britain I received assistance from numerous members of the staff of the Public Records Office, the National Maritime Museum, the British Library, the Newspaper Library at Collingdale, the Guildhall Library, National Register of Archives, the Archives of the National Museums and Galleries on Merseyside, Liverpool City Libraries, the Birkenhead Archives, the Glasgow University Archives, Strathclyde Regional Archives, Glasgow Museum of Transport, Watt Library in Greenock and the University of St. Andrews Library. The time and attention numerous individuals at those institutions and agencies devoted to my inquiries made the research a pleasure.

In the United States similar thanks and acknowledgment must go the staff of the National Archives in Washington and Regional Archives in Boston, Bayonne, Philadelphia and Atlanta, the Library of Congress, the Steamboat Historical Society at the University of Maryland, Baltimore, the Mariner's Museum Library, the North Carolina State Archives, the Southern Collection at the University of North Carolina, the Duke University Library, the East Carolina University Library and Manuscript Collection, the Wilmington Library, the South Carolina Historical Society Archives, the Library of Charleston, the Caroliniana Collection at the University of South Carolina and the South Carolina State Archives.

Research in Bermuda focused on the collections of the Bermuda Archives, the Hamilton City Library and the St. Georges Historical Society and would not have been nearly so productive had it not been for the attention of personnel of each institution. In Bermuda the field research on the remains of two blockade runners was also supported by the Bermuda Maritime Museum.

Field research in North Carolina was supported by assistance from the North Carolina Division of Archives and History and by data generated by research funded by the United States Army Corps of Engineers, Wilmington District, East Carolina University and the National Park Service. The St. Andrew's Society of North Carolina made much of my research in Great Britain possible by providing a generous scholarship grant for travel to Scotland.

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I could not submit this document without recognizing the positive impact of years of encouragement from my grandmother Lena Tillman, my aunt Deeda Sessoms and my mother and father Virginia and Gordon Watts. Their confidence and encouragement has inspired me to undertake exciting projects in spite of my own reservations. Finally, I would like to thank my family, my wife Carole and my daughters Adger and Camden, for their understanding, encouragement and support during years of absence pursuing research and months cloistered away while writing.

Introduction

During the American Civil War Wilmington, North Carolina and the Bermudian ports of St. Georges and Hamilton served as vital links in a complex trading network that developed to facilitate the exchange of southern agricultural products for war materials and civilian merchandise through a Union blockade of the Confederacy (Figure 1). In spite of the constantly increasing vigilance of Union naval vessels, a fleet of swift and powerful steamers provided the technology to maintain Anglo-Confederate commerce. Using those steamships Confederate government agencies, states, and British and Confederate merchants shipped cotton and other southern agricultural products abroad. Proceeds from those sales and bonds backed by agricultural products such as cotton financed weapons, war materials and a variety of manufactured products supplied by British mercantile firms and speculators. Although never developed to its full potential, blockade running ensured an uninterrupted supply of war materials and other manufactured goods that sustained southern efforts to secede from the union of states formed in 1789.

As a consequence of Union efforts to isolate the Confederacy from foreign markets and Anglo-Confederate efforts to maintain that foreign commerce, the coastal waters of southeastern North Carolina and Bermuda contain the remains of thirty of the steamships that carried on that important trade. Although not all of those shipwrecks have been identified, eighteen have been located and, to one degree or another, examined. Those sites represent the most comprehensive source of archaeological data concerning American Civil War blockade runners. More than thirty years of research carried out on, or associated with, those eighteen wrecks has generated a variety of archaeological and historical data concerning the design, construction, operation and cargoes of Anglo-Confederate blockade runners engaged in trading between Bermuda and Wilmington.

This thesis represents an attempt to combine the results of that research in a document that more accurately and comprehensively illustrates the nature and scope of Anglo-Confederate blockade running. Because the focus of almost all of the research associated with Civil War blockade runners has been on the activities that linked North Carolina and Bermuda, it seemed appropriate to explore and develop that connection as a model that could facilitate

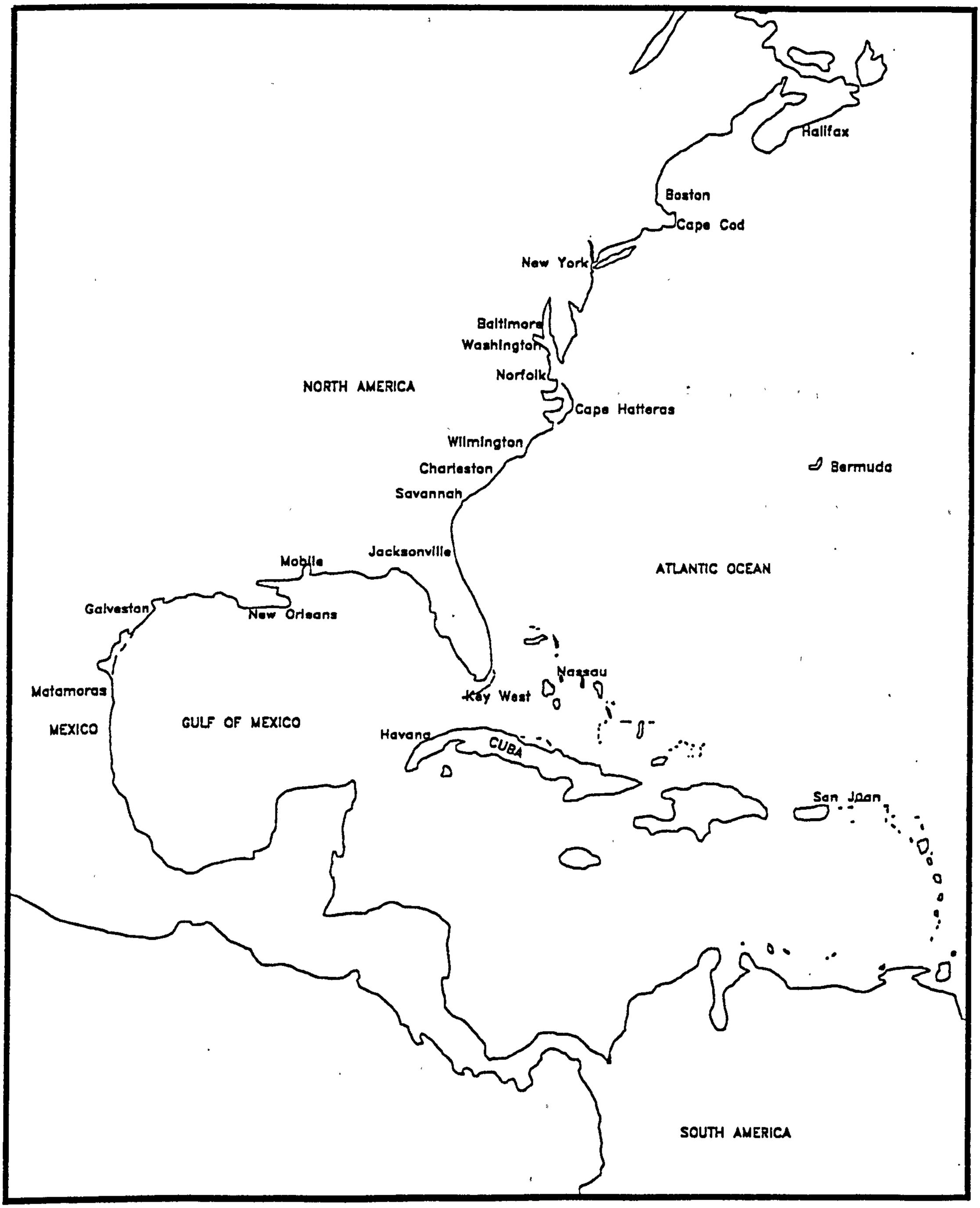

Figure 1. Map of the Atlantic Seaboard, Gulf of Mexico and West Indies.

understanding the trade in more general terms. Using the trading network that developed between Wilmington and Bermuda as a focus for understanding the trade appeared all the more logical because of the availability of both shipwreck data and historical records that no longer exist for Nassau and are unavailable for Havana. Three specific areas of interest appeared especially productive.

The first was an examination of the mechanics of successfully trading through the Union blockade. Specific issues addressed by the research included documenting the evolution of strategies involved in both establishing and maintaining the blockade and those that were developed for running the blockade. Although the blockade has been well documented at Wilmington, the subject was reconsidered to establish a background for blockade running and because the strategies adopted by blockade runners reflected those developed by the United States Navy.

A second consideration was the identification and assessment of steam vessels that made trading through the blockade possible. The Civil War shipwrecks of Bermuda and Wilmington represent perhaps the most extensive collection of wrecked blockade runners available for examination. The value of that collection of shipwrecks is also enhanced by the volume of data concerning British built blockade runners that survives in archives in England and Scotland. Much of that material has never been systematically examined or treated by historians. Although most of the literature associated with Anglo-Confederate blockade running suggests that many of the technological innovations on steam powered blockade runners were specifically developed to address the demands of the trade, a more detailed examination of the issue confirmed that blockade runners adapted extant technology. With the exception of camouflage paint schemes, no technological innovations were specifically developed to address the demands of the trade.

A final consideration was the specific nature of material shipped through the blockade. Because blockade running was of necessity a clandestine enterprise, the nature of cargoes was frequently and deliberately obscured. Salvage of the blockade runner *Modern Greece* suggested that the most comprehensive source of cargo specific data would be the shipwrecks. While that did not prove to be the case, exploration of the wrecks and investigation of previously untapped archival sources provided new and valuable insight into

the cargoes of Anglo-Confederate steamers. While salvage left little evidence of cargo in the archaeological record, historical research revealed a wealth of new insight into the specific nature of that material.

In order to develop the thesis additional historical research was carried out in Bermuda, Great Britain and the United States. Although utilized and in part published almost half a century ago by Frank E. Vandiver, the Bourne letter books and Bermuda Customs records from St. Georges and Hamilton were reexamined. They were found to contain a wealth of information that has not been fully developed. Data contained in those sources was complimented by additional records in British repositories. Chief among those was the Public Records Office. There records include communications from the Governor of Bermuda and those associated with the Royal Navy at Dockyard. British newspaper sources, including the Confederate propaganda organ *Index* that are preserved at the British Library Newspaper Repository in Collingdale were examined for insight into blockade running activities and ship procurement and construction. In addition, records associated with the firms that built blockade runners and the plans and details of the ships themselves preserved in British university and museum collections were examined.

In the United States, additional information can be found in the communications captured aboard vessels attempting to run the blockade. Those relevant archival collections were found in regional repositories of the National Archives at Waltham, Massachusetts; Newark, New Jersey; Philadelphia, Pennsylvania; Washington, D. C. and Atlanta, Georgia. Surprisingly those data, identified by Madeline R. Robinton in *An Introduction to the Papers of the New York Prize Court* had also not been fully examined. Records associated with activities at the Port of Wilmington and the blockade running records of the State of North Carolina survive in collections of the North Carolina Division of Archives and History. There collections such as the papers of North Carolina's Civil War Governor Zebulon B. Vance were examined. Additional records associated with Confederate Government blockade running were examined in repositories in both Richmond, Virginia and Washington, D. C. Finally, a surprising amount of untapped information was found in manuscript sources preserved in the archives associated with several southern universities. Those records were associated with individuals, businesses, officials and officers involved in one way or another with the trade.

Additional insight into the clandestine business of blockade running required synthesizing data generated by archaeological research. Accomplishing that objective included reexamination of data generated during the last three decades of Civil War shipwreck investigation. That investigation concentrated on identification and examination of the records, reports, and publications produced in conjunction with salvage and field research projects. As salvage activities produced almost all of the available blockade runner related cultural material, examination of surviving collections was also undertaken.

Field investigations were carried out in both Bermuda and North Carolina waters. In Bermuda that research focused on the remains of the steamers *Mary Celestia* and *Nola*. As both vessels were extensively salvaged after sinking, the focus of on-site research was to document the surviving vessel structure and machinery. In North Carolina the wrecks of the steamers *Modern Greece* and *Kate* lost in 1862, the *Hebe, Phantom, Arabian, Elizabeth, Douro, Venus* and *Beaureguard* lost in 1863 and the *Bendigo, Ranger, Wild Dayrell, Dee, Fanny & Jenny, Lynx, Ella, Stormy Petrel* and *Agnes E. Fry* lost in 1864 were examined to identify associated cargo and document the surviving vessel structure and machinery. The focus of site specific research was to accurately locate and identify each of the vessels and carry out a reconnaissance survey of each site. Reconnaissance activity was designed to generate sufficient data to support the development of a description of the exposed wreck remains and assess the nature and scope of associated cargo.

In the final analysis, it appears that the continuation of international commerce enabled the Confederacy to survive and resist long after the rebellion should have collapsed. The success of the blockade runners that maintained that commerce was based on international politics, the evolution of successful strategy, the availability of steam powered blockade runners, and the nature of the cargoes they carried. This examination of both historical and archaeological resources provides new insights into that clandestine trade and the strategies, ships and cargoes that made blockade running a success. Perhaps not surprisingly, the results of this research challenge many of the existing perceptions of Anglo-Confederate commerce.

Historiography

In spite of the critical role that Anglo-Confederate blockade running played in sustaining southern efforts to secede from the Union by force of arms, the subject has received relatively limited attention by American Civil War historians. A cursory examination of American Civil War historiography confirms that most scholars have focused their research on politics, domestic social and economic issues, military activities, and personalities of the period. Campaigns of the Union and Confederate armies have received the most intense scrutiny. Those historians interested in the impact of naval activities have concentrated on establishing and maintaining the naval blockade and the various aspects of naval and riverine warfare. Blockade running received only marginal attention and its impact on the war was generally considered inconsequential.

Initial consideration of the subject of blockade running was provided by veterans of the service who afforded the public exciting and frequently romanticized accounts of their experiences and exploits. Immediately after the war Augustus Charles Hobart-Hampden, a British naval officer who captained blockade runners while on furlough, published his account of the adventure in *Never Caught* in 1867. Ten years later in 1877, John Wilkinson, another highly successful blockade runner, published his experiences in *The Narrative of a Blockade Runner* and in 1882, the first of John Newland Maffitt's articles on "Blockade Running" appeared in United Service magazine.

Two years after Maffitt's articles began to appear, James D. Bulloch's *The Secret Service of the Confederate States in Europe* provided a detailed account of how he and other Confederate agents managed to secure ordnance, war materials, and ships for the Confederacy in spite of Union efforts to curtail southern procurement abroad. Although Bulloch's account concentrated on politics, efforts to obtain war material, and the construction and equipping of commerce raiders, his observations also shed some light on blockade running. William Watson's *The Adventures of a Blockade Runner; or Trade in Time of War* appeared in 1892 and Captain M. P. Usina's *Blockade Running in Confederate Times* was published in 1895. Both proved to be romanticized but interesting reflections on the clandestine trade. The experiences of Thomas E. Taylor appeared in one of the most popular accounts of the trade; *Running the Blockade* published in 1897. Although of considerable interest, these highly popular accounts were little more than entertainment. Later in 1902 James

Sprunt brought out *Tales of the Cape Fear Blockade: Being a Turn of the Century Account of Blockade Running* and in 1919 he produced *Derelicts: An Account of Ships Lost at Sea in General Commercial Traffic and a Brief History of Blockade Runners Stranded Along the North Carolina Coast 1861-1865.*

When organized Civil War veterans began to celebrate their experiences late in the nineteenth century, Americans discovered a new and more sophisticated interest in the War Between the States. That interest stimulated historical research and produced the first detailed examination of naval and maritime activities. Between 1894 and 1927 the United States Naval War Records Office compiled and published a series of 31 volumes titled *Official Records of the Union and Confederate Navies in the War of the Rebellion.* This publication made primary source data available to both the public and professional historians and still serves as a principal source of data concerning Civil War naval activity. Historians such as James Russel Soley produced the first detailed account of the blockade in *The Blockade and the Cruisers* published as one of three volumes in a series on *The Navy and the Civil War* brought out by Charles Scribner's Sons in 1883. While Soley's examination of the subject concentrated on the Union blockade, a chapter on blockade running combined the romance of the trade within an historical context. In 1887, Thomas J. Scharf produced his two volume *History of the Confederate Navy* published by Rogers and Sherwood in New York. Scharf included a single chapter on the blockade and blockade running that represents a serious but general and only superficially detailed assessment of the subject. Surprisingly, the works of Soley and Scharf remained the most comprehensive treatment of the subject until the Civil War Centennial Celebration focused new attention on Civil War America.

In 1925, Francis B. C. Bradlee published *Blockade Running During the Civil War, and the Effect of Land and Water Transportation on the Confederacy.* Bradlee, like Soley and Scharf, relied heavily upon the nineteenth century reminiscences of those who participated in the trade. Unfortunately, his efforts to examine the companies that supported the trade suffered from equally inadequate sources. Frank L. Owsley's *King Cotton Diplomacy: Foreign Relations of the Confederate States of America* published in 1935 was the first historical treatment of the subject that accurately identified

the importance of blockade running. Owsley's chapter on "The Ineffectiveness of the Blockade" was the first to seriously explore the success of blockade runners and their impact on Confederate maritime commerce.

Madeline R. Robinton published her dissertation on records associated with the adjudication of captured blockade runners as *An Introduction to the Papers of the New York Prize Court* in 1945. Although the work produced an excellent and extremely valuable catalog of adjudication records, Robinton did not attempt to weave the data into an enhanced historical context. Three years later, Marcus W. Price began a series of articles on blockade running for the *American Neptune* with a detailed accounting of "Ships that Tested the Blockade of Carolina Ports, 1861-1865." Price's *American Neptune* article and subsequent publications identified the ships that ran the blockades of Georgia, East Florida, and Gulf of Mexico ports and the masters and pilots that served the trade. While many historians questioned Price's statistics, the work clearly supported Owsley's earlier premise that the blockade was "a leaky and ramshackle affair." In 1947, Frank E. Vandiver edited and published letter books and customs records associated with blockade running activities in Bermuda in his *Confederate Blockade Running Through Bermuda, 1861-1865.* Like Robinton's treatment of the New York Court records, Vandiver's work provided an excellent introduction to the sources but failed to effectively utilize the data to enhance the historical record. He did however conclude like both Owsley and Price that the success of the trade "....enabled the Confederate armies and people to carry on appreciably longer than would otherwise be possible" had the Union blockade been effective.

Popular interest in the blockade and blockade running was rekindled immediately prior to the Civil War Centennial. Hamilton Cochrane's 1958 volume on *Blockade Runners of the Confederacy* combined the personal accounts of Thomas Taylor, Augustus Hobart-Hampden, John Wilkinson and other veterans of the service in a popular historical background. *The Blockade Runners: True Tales of Running the Yankee Blockade off the Confederate Coast* written by Dave Horner in 1968, also relied heavily on those early sources in a popular treatment of the subject that included a description of early exploration of sunken blockade runners off the Cape Fear coast of North Carolina. Virgil C. Jones produced three volumes on the *Civil War at Sea* during 1960 and 1962 and articles in *Civil War Times Illustrated* in 1960

"Slipping through the Blockade" and 1971 "Mr. Lincoln's Blockade". None reflected a comprehensive assessment of the subject and most relied heavily on well utilized secondary sources.

The *Journal of the Confederate Historical Society, the Journal of Southern History* and *American Neptune* all published articles on blockade running in response to interest generated during the Centennial period. In *The Journal of the Confederate Historical Society* Wendell Pierce published "The Blockade Runner *Acadia*" in the Winter 1973 issue, W. A. C. Simpson published "Britain and the Blockade" in the Spring 1968 volume, and in the Summer 1965 issue Jerry Williams published the "Wirral-Built Blockade Runners of the American Civil War". The *Journal of Southern History* published William Diamond's "Imports of the Confederate Government from Europe and Mexico" in November 1940, Kathryn Hanna's "Incidents of the Confederate Blockade" in May 1945, Edith Gentry's "A Confederate Success in Europe: The Erlanger Loan" in May 1970 and "The Activities and Attitudes of a Confederate Business Man: Gazaway B. Lamar" by Edwin Coddington in February 1943. *American Neptune* published "Investment by Sea: The Civil War Blockade by Robert Johnson in January 1972, a series of articles by Marcus W. Price that began with "Ships That Tested the Blockade of Carolina Ports, 1861-1865" published in April 1948 and continued with "Blockade Running as a Business in South Carolina during the War Between the States, 1861-1865" in January 1949, "Ships that Tested the Blockade of the Gulf Ports, 1861-1865" in January and July 1952, "Ships that Tested the Blockade of the Georgian and East Florida Ports, 1861-1865" in April 1955, "Four from Bristol" in October 1957, and "Masters and Pilots Who Tested the Blockade of Confederate Ports, 1861-1865" published in April 1961.

Steamboat Bill of Facts published A. C. Wardle's "British Built Blockade Runners" in December 1954 and a series on specific ships authored by Eric Heyl "The Blockade Runner SCOTIA" and "The Lady Was a Tramp" in the Fall 1963. While Price concentrated on identifying the ships, captains, and pilots involved in blockade running, Wardle concentrated on the careers of a few individual ships both during and after the war.

Without question the most comprehensive and scholarly treatment of the subject to date is Stephen R. Wise's *Lifeline of the Confederacy* published in 1988. Wise's examination of blockade running is a broad brush treatment of

the trade that concentrates primarily on economics and administration. While the study is unquestionably the most thorough examination of blockade running it sacrifices detail to achieve a manageable overall perspective.

In 1991, Kevin Foster examined vessels engaged in blockade running in a masters thesis titled: "The Search for Speed Under Steam: The Design of Blockade Running Steamships, 1861-1865." Foster's thesis focused on the technology associated with the design and construction of steam powered blockade runners in Great Britain. His research was based on historical records associated with contemporary engineering publications, descriptions of the vessels and their operations recorded in the memoirs of individuals that commanded or served on specific ships. Foster's thesis was designed to provide a technological and design history of the steam vessels engaged in blockade running and identify the demands of the trade that influenced the development of new technology. Although a valuable survey, Foster's work does not give adequate attention to the more general considerations and preoccupations that influenced technological development in Great Britain prior to and during the period of the American Civil War.

With the exception of Foster's thesis and Wise's *Lifeline of the Confederacy*, the majority of those treatments of the subject of American Civil War blockade running have been either popular accounts or dated general historical treatise that are somewhat limited in detail. Collectively this material provides a perspective that is not fully developed. Research and writing to date leaves numerous historical sources untapped and ignores many fertile areas of research. Examination of that material can contribute to a more comprehensive understanding of blockade running.

The extant perception of blockade running is based almost entirely on the historical record. However, during the last three decades examination of the physical remains of sunken blockade runners has generated additional insight in the trade. In many cases the shipwreck investigations represented little more than efforts to salvage material associated with the vessels. With few exceptions, those projects produced almost no record of the on-site activities or documentation of artifacts recovered from the wreck sites. Although little archaeology was involved in those early investigations, salvage projects produced a variety of artifacts and some information on the vessels themselves. Subsequent investigations reflected nascent archeological considerations but were generally limited to reconnaissance level structural

documentation and testing. Although no comprehensive examination of the wreck of a blockade runner has been carried out to date, more recent investigations have generated important insight into the trade and the vessels that made it successful.

The first efforts to locate, identify and recover material from those wrecks were carried out during the Civil War Centennial celebration. The impetus of those early investigations was a result of the highly publicized salvage of material from the blockade runner *Modern Greece*. In spite of the interest generated by salvage activity, little was published beyond a plethora of newspaper and magazine articles. Perhaps the first author to include information on salvage activity was David Horner. In his *The Blockade Runners: True Tales of Running the Yankee Blockade off the Confederate Coast* published in 1968, Horner documented some of that early salvage and exploration activity. *The Blockade Runners* combined both an historical treatment of blockade running anecdotes based on the writings of such authors as John Wilkinson, Thomas Taylor and James Sprunt and personal communications with early explorers and salvors working in North Carolina such as Hall Waters and Punkie Kure. In the late 1960s, Edward L. Spence recovered material from blockade runners sunk off Charleston and two decades later personally published limited accounts of his salvage of the steamers *Georgiana* and *Mary Bowers* in *Shipwrecks of South Carolina and Georgia.*

Archaeological interest in Civil War shipwrecks associated with blockade running began to result in more professional publications during the following decade. Although very site specific they documented rising historical and archaeological recognition of the significance of investigating shipwrecks associated with blockade running. In 1973, the author and Leslie S. Bright published "Progress in underwater archaeology in North Carolina 1962-1972" in the *International Journal of Nautical Archaeology and Underwater Exploration.* That article documented some of the salvage activity associated with Civil War shipwrecks in North Carolina. Frank Hole published a report on his investigation of the remains of the blockade runner *Acadia*, lost off the Texas coast near Galveston in a report titled "The *Acadia*: A Civil War Blockade Runner." That 1974 volume documented Hole's historical and archaeological investigation of the wreck of the *Acadia*. By 1977, personnel of the Underwater Archaeology Unit of the North Carolina Division of Archives and History had cataloged and documented material recovered from the

blockade runner *Modern Greece.* That same year the collection was published by the North Carolina Division of Archives and History in *The Modern Greece and Her Cargo.* A similar treatment of the vessel history and catalog of the material recovered from the Confederate blockade runner and warship *Nashville* was compiled and published by Franklin N. Chance, Paul C. Chance and David L. Topper in 1985. Their volume titled *Tangled Machinery and Charred Relics: The Historical and Archaeological Investigation of the C.S.S. Nashville* documented the history, wreck remains and cultural material recovered by investigation of the remains of that unique blockade runner.

In 1988, the author published "The Civil War at Sea: Dawn of an Age of Iron and Engineering" in *Ships and Shipwrecks of the Americas,* edited by George F. Bass and "Bermuda in the American Civil War: A Reconnaissance Investigation of Archival and Submerged Cultural Resources" in the *International Journal of Nautical Archaeology.* Both publications focused at least superficially on some of the results of more than a decade of research on blockade runners previously treated in a variety of unpublished research and submerged cultural resource management reports. The following year, the author also produced a popular article on the subject for *Archaeology* titled "Runners of the Union Blockade." In spite of the research that has been carried out, archaeologists, like the historians who have focused on blockade running, have produced only a few publications with limited focus.

Chapter I The Blockade and Occupation of North Carolina Sounds

When the USS *Daylight* appeared off Cape Fear on the North Carolina coast on 13 July 1861, hostilities associated with the Civil War in America were already in their third month.[13] Under the command of Commander Samuel Lockwood the small wooden screw steamer had been dispatched to formally establish a Union blockade of the Port of Wilmington located some twenty miles inland on the Cape Fear River.[14] Closing Wilmington to maritime commerce was one objective in a complex plan adopted by newly elected President Abraham Lincoln to isolate the Confederate States of America from all sources of foreign assistance and commerce. The "Anaconda Plan" had been conceived by the aging General Winfield Scott and Secretary of State William Seward as a method of strangling the life out of the southern rebellion without a protracted and costly armed conflict. President Lincoln proclaimed his intentions to close ports in South Carolina, Georgia, Alabama, Florida, Mississippi, Louisiana and Texas on 19 April 1861 and extended the blockade to include Virginia and North Carolina on 27 April. Lincoln:

> ....deemed it advisable to set on foot a blockade of the ports within the States aforesaid, in pursuance of the laws of the United States and of the Law of Nations in such case provided. For this purpose a competent force will be posted so as to prevent entrance and exit of vessels from the ports aforesaid. If, therefore, with a view to violate such blockade, a vessel shall approach or shall attempt to leave any of the said ports, she will be duly warned by the commander of one of the blockading vessels, who will endorse on her register the fact and the date of such warning, and if the same vessel shall again attempt to enter or leave the blockaded port, she will be captured, and sent to the nearest convenient port for such proceedings against her, and her cargo as a prize, as may be deemed advisable.

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[13] S. Lockwood to S. H. Stringham, 16 July 1861, *Official Records of the Union and Confederate Navies in the War of the Rebellion*, 31 Volumes. (Washington: Government Printing Office, 1894-1927) Series I, Volume 6, pp. 11-12. Hereafter cited as *ORN*.

[14] *Civil War Naval Chronology* 1861-1865, Naval History Division, Navy Department, Washington D. C., 1971, pp. 1-19.

Once in effect, the Union blockade would permit the United States Navy to search and seize vessels attempting to engage in communication and commerce with the Confederacy.[15]

The blockade President Lincoln proposed to establish was not adopted without reservations. In 1856, forty-six nations signed the Declaration of Paris. That document established a series of codicils governing international relations that included several significant maritime considerations. According to the Declaration of Paris privateering was abolished. Also, with the exception of cases involving contraband of war, a neutral flag provided protection for enemy goods and neutral goods were determined not liable to capture under an enemy flag. Finally and perhaps most significantly, the forty-six nations signing the document agreed that "to be binding" a blockade had to be effective and "maintained by a force sufficient to prevent access to the coast of the enemy."[16] While the United States had not signed the treaty in 1856, the political and military necessities of 1861 dictated a change of position and Secretary of State William H. Seward informed diplomats abroad that the United States would, as a consequence, adhere to the document.[17]

President Lincoln's declaration of a blockade of those states attempting to secede from the Union created several additional problems for the United States. Secretary of the Navy Gideon Welles, one of the blockade's most serious critics, cautioned Lincoln that the declaration of a blockade was nothing less than a mistake. Welles later wrote that: "We had placed ourselves in a wrong position at the beginning, made the Rebels belligerents, given them nationality, an error, an anomaly. It was one of Mr. Seward's mistakes."[18] In addressing Congress on 4 July 1861, Secretary Welles reported that:

> In carrying into effect these principals, and in suppressing the attempts to evade and resist them, and in order to maintain the Constitution and execute the laws, it became necessary to interdict

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15 Abraham Lincoln to William Seward, 19 and 27 April 1861, *ORN*, I, 5, pp. 620-621.

16 Francis Deak and Philip C. Jessup, eds, *A Collection of Neutrality Laws, Regulations and Treaties of Various Countries*, 2 Vols. Washington: Carnegie Endowment for International Peace, 1939, Vol. II, pp. 1473-1474.

17 Thomas J. Scharf, *History of the Confederate States Navy From Its Organization To The Surrender Of Its Last Vessel*, New York, Rogers and Sherwood, 1887, reprinted., New York: The Fairfax Press, 1977, p. 431.

18 Howard K. Beale, ed., *Diary of Gideon Welles*, 3 Vols, New York: W. W. Norton and Company Inc., 1960, Entry 15 October 1862, Vol. 1, p. 174.

commerce at those ports where duties could not be collected, the laws maintained and executed, and where the officers of the Government were not tolerated or permitted to exercise their functions. In performing this domestic municipal duty, the property and interests of foreigners became to some extent involved in our home questions, and with a view to extending to them every comity that the circumstances would justify, the rules of the blockade were adopted, and, as far as practicable [sic], made applicable to the cases that occurred under this embargo or non-intercourse of the insurgent States. The commanders of the squadron were directed to permit the vessels of foreigners to depart within fifteen days, as in cases of actual effective blockade, and the vessels were not to be seized unless they attempted, after having been once warned off, to enter an interdicted port in disregard of such warnings.[19]

At the recommendation of the Treasury Department, Lincoln additionally complicated matters by signing the Ports Act passed by Congress in July 1861. The Ports Act authorized the President to close ports to maritime commerce and collect customs duties aboard ships stationed off a port. The inconsistencies of the United States policy particularly disturbed the British. In accordance with international law a state cannot blockade its own ports, only those of its enemy. On the one hand, as the *London Times* pointed out:

> We are at this moment neutrals, but history informs us that the normal state of this country in time of war is that of a belligerent, and, as the first maritime Power in the world, a blockade is by far the most formidable weapon we possess. Surely we ought not to be overready to blunt its edge or injure its temper?[20]

British foreign secretary, Lord John Russell observed:

> It is impossible for Her Majesty's government to admit that the President or Congress of the United States can at one and the same time exercise the belligerent right of blockade, and the municipal right of closing the ports of the South.

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19 "Report of the Secretary of the Navy", 4 July 1861, Congress of the United States, Government Printing Office, Washington, D. C., pp. 89-90.
20 *London Times*, 10 February 1862.

> In the present case, Her Majesty's government do not intend to dispute the right of blockade on the part of the United States with regards to ports in possession of the Confederate States, but an assumed right to close any ports in the hands of insurgents would imply a right to stop vessels on the high seas without instituting an effective blockade. This would be a manifest evasion of the necessity of blockade in order to close an enemy's port....Maritime nations would not submit to this excess under the pretense of the rights of sovereignty.[21]

Unofficially, Lord Russell confided to Lord Lyons:

> If our ships can go in ballast for cotton to the southern ports it will be well, but if this cannot be done by agreement there will be surely, in the extent of 3,000 miles, creeks and bays out of which small vessels may come, and run for Jamaica or the Bahamas where the cargoes might be transhipped. But it is not for Downing Street to suggest such plans to Cheapside and Tooley Street.[22]

Lord Palmerston appeared to have been in agreement and in a letter to Russell he indicated that the most appropriate policy should be to "keep quite clear of the conflict between North and South" and in spite of the blockade "the probability is that some cotton will find its way to us from America...."[23]

In the face of mounting European pressure and recommendations from Seward, Lincoln elected to put a blockade into effect rather than risk the consequences of attempting to "close" those ports under Confederate control.[24] That entailed securing more than 3500 miles of coastline from the Chesapeake Capes to the border with Mexico. Only in the United States Navy was the real impact of Lincoln's proclamation immediately recognized. To develop an effective blockade Secretary of the Navy Gustavus Vasa Fox assembled a "Blockade Strategy Board" composed of Captain Samuel F. Du Pont and

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21 Lord John Russell to Lord Richard Lyons, 19 July 1861, quoted in Genry Glass, "Maritime International Law", *United States Naval Institute Proceedings* Vol. 11, No. 3, 1885, p. 460.

22 Ephriam D. Adams, *Great Britain and the American Civil War*, Vol. 1, Peter Smith, Gloucester, 1957, p. 252.

23 *Ibid.*, pp. 199-200.

24 Stuart Anderson, "1861: Blockade vs. Closing The Confederate Ports", *Military Affairs*, Vol. 41, December 1977, p. 190.

Commander C. H. Davis of the United States Navy, Major John G. Bernard of the U. S. Army Corps of Engineers and Professor Alexander D. Bache of the United States Coast Survey.

Each of the other members of the board was selected to bring specific knowledge and experience to the decision-making process. Major John G. Bernard of the U. S. Army Corps of Engineers represented that branch of the U. S. Army responsible for development and maintenance of harbor facilities, fortifications and navigable channels in the United States. Bernard would be able to shed important light on the fortifications protecting southern harbors, port facilities, navigation channels and the mechanics of their obstruction and clearing. Professor Alexander D. Bache of the United States Coast Survey brought to the board the extensive experience his agency had accumulated in several decades of charting the southeast Atlantic and Gulf coastal waters. Bache conducted and superintended the hydrographic survey work and the production of most of the charts employed for navigation in United States waters. He and Du Pont had previously served on a board formed in 1851 to investigate the Lighthouse Establishment. Bernard and Bache were clearly instrumental sources of critical geographical and technical information. Their input was also important in identifying priorities of the blockade and developing realistic objectives for the U. S. Navy. Commander C. H. Davis was the final member of the board. He was an experienced officer and a long time friend and loyal supporter of Captain Du Pont. In addition to serving as a member of the board Davis served as its secretary.[25]

The Blockade Strategy Board first assembled in Washington, D. C. on 27 June 1861.[26] Following consideration of such questions as "What is an effective blockade", the relevant statutes of the "Law of Nations" and the "Naval, Nautical and Commercial" considerations of a blockade, the board addressed the matter of establishing coaling stations on the southeastern Atlantic seaboard that could support the steamers required to guard the Confederate coast.[27] After preparing a report on the matter for Secretary Welles on 4 July 1861, the board members turned their attention to the requirements of an

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25 Davis, Charles H., *Life of Charles Henry Davis, Rear Admiral, 1807-1877*, Boston, 1899.

26 *Du Pont to Wife Sophie, 28 June 1861, in Hayes, John D., Samuel Francis Du Pont A Selection from his Civil War Letters.* Cornell University Press, Ithaca, New York, Vol. 1, 1969, p. 85-86. Hereafter cited *Du Pont, Civil War Letters.*

27 *Ibid.*, and "Papers of the Blockade Stratagy Board," Record Group 45, National Archives, Washington, D. C.

effective blockade. In a second report dated 16 July 1861, the board recommended that the Atlantic blockade be divided into two distinct areas. That recommendation was based on the geographic and environmental features that distinguished the area between Cape Henry, Virginia and Cape Romain, South Carolina from the area between Cape Romain and St. Augustine, Florida.[28] The area between Cape Henry and Cape Romain was characterized by "narrow belts of sand which separate large inland waters from the ocean, and are divided at irregular intervals by openings or inlets through which the ocean tides ebb and flow and access is obtained to the enclosed sounds."[29] The area between Cape Romain and St. Augustine was characterized by what the board called "ordinary ports and bays".[30]

Because of the distinctive difference in the geography and physical features of the two areas, the board felt that two decidedly different approaches to management of the blockade were required. Their first consideration was the area between Cape Henry and Cape Romain. That included the entire coast of North Carolina and portions of southern Virginia and northeastern South Carolina. The board was quick to point out that the Elizabeth and James Rivers and consequently the Virginia ports of Richmond and Norfolk could not be effectively blockaded until the entrances to North Carolina's Albemarle, Pamlico and Core sounds were closed. Both the James and Elizabeth Rivers were connected to the sounds of North Carolina by the Dismal Swamp and Albemarle and Chesapeake Canal.

The Dismal Swamp Canal was a narrow and relatively shallow waterway that connected the Southern Branch of the Elizabeth River with the upper reaches of the Pasquotank River above Elizabeth City, North Carolina. That canal had been laboriously dug by hand early in the nineteenth century and offered navigation to small shallow draft vessels and flats.[31] The Albemarle and Chesapeake Canal had been completed in 1859 and connected the Southern Branch of the Elizabeth River with the North Landing River and Currituck Sound.[32] Unlike the Dismal Swamp Canal, the Albemarle and Chesapeake

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28 Blockade Board to Gideon Welles, 5 July 1861, *ORN*, I, 12, p. 198.
29 *Ibid.*
30 *Ibid.*
31 Alexander C. Brown, *Juniper Waterway: A History of the Albemarle and Chesapeake Canal.* University of Virginia Press, Charlottesville, Virginia, 1981, p. 18-26.
32 *Ibid.*, pp. 58-62.

Canal had been dug using steam machinery and had sufficient depth and breadth to accommodate both sailing vessels and steamers. Commercial connections between the port of Norfolk and northeastern North Carolina were also enhanced by the Elizabeth City and Norfolk Railroad. The northern terminus of the Elizabeth City and Norfolk was Portsmouth, Virginia and the southern terminus was Edenton, North Carolina near the western end of the Albemarle Sound.[33] The Elizabeth City and Norfolk Railroad served what would become one of the most important sources of agricultural products for Confederate armies in the field.

The board clearly recognized that as long as the sounds of North Carolina and the shallow inlets that afforded access to the Atlantic were open to navigation no blockade of the Confederacy could be effective. To interrupt that trade the board proposed "putting down material obstructions" that would close shallow channels within the sounds. The most effective method of closing channels to navigation appeared to be sinking old vessels laden with ballast. Because of the nominal tidal bore within the sounds, the board felt that such obstructions would survive long enough to accomplish the desired objectives and would only be dislodged by extremely powerful storms. While the board suggested that the hulks be periodically examined to ensure that they were not removed, they concluded that the Confederates had virtually no means of clearing the wrecks.[34]

The board carefully studied each of the North Carolina inlets from Cape Henry to Tubbs Inlet. Oregon Inlet, located 45 miles south of Cape Henry provided the only access to the sounds north of Cape Hatteras. Because of the "dangerous shifting bar" the board recommended that Oregon Inlet be obstructed by sinking as many hulks as were necessary to eliminate navigation. Hatteras Inlet, 11 miles southwest of Cape Hatteras, and Ocracoke Inlet, 14 miles southwest of Hatteras were more stable with deeper channels. The board recommended that channels inside the sounds be obstructed leaving the inlets and anchorages inside the Outer Banks open to serve as harbors of refuge. Du Pont, Davis, Bernard and Bache also recommended that a decision be made concerning the most appropriate method of eliminating commerce on the sounds. If plans called for the capture and occupation of towns on the

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33 Black, Robert C.,III. *The Railroads of the Confederacy*. University of North Carolina Press, Chapel Hill, 1952.

34 Blockade Board to Gideon Welles, 16 July 1861, *ORN*, I, 12, p. 199.

Pasquotank, Chowan, Roanoke, Pamlico and Neuse rivers, Hatteras and Ocracoke inlets would be critical to the invasion.[35] Although that recommendation was well taken by Lincoln, the boards strong suggestion to obstruct navigation with lines of hulks instead of occupying towns in the area was dismissed. They warned that during summer the "whole region of marshes and cedar swamps is fatally unhealthy....to our Northern constitutions." The board also expressed their concern about Cape Hatteras. They agreed that:

> The vicinity of Cape Hatteras is one of the worst regions on our coast for tempestuous weather, the cape itself being the point of separation between the storms peculiar to the two divisions of the country-the West India hurricanes at the south, the course of which, after striking the ocean borders of Florida, Georgia, and South Carolina, turns to the eastward before arriving at Cape Hatteras, and the common northeast storms of our Northern States, which begin at the southwest extremity of their track and make their progress to the northward and eastward.[36]

Those elements would make station-keeping on the North Carolina coast a dangerous business.

Between Cape Lookout and Cape Fear, Du Pont, Davis, Bernard and Bache also recommended obstructing Bogue Inlet and New Inlet with hulks. Between Cape Fear and the South Carolina border they listed Lockwoods Folly and Tubbs Inlet for similar obstruction. Other inlets like Old Topsail, Masonboro and Little River Inlet on the South Carolina boundary were apparently considered too shallow and dangerous for navigation. No specific recommendations were tendered for their obstruction.

In addition to recommending closing the sounds to navigation and obstructing most of the navigable inlets, Du Pont, Davis, Bernard and Bache pointed out that North Carolina had two important ports. According to their conclusions, both would require a blockading squadron unless expeditions were dispatched to capture the fortifications that protected the navigation channels. Those two ports were Beaufort, immediately west of Cape Lookout, and Wilmington, twenty miles up the Cape Fear River from Smith Island. The harbor at Beaufort was protected by Fort Macon, a small but well built

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35 *Ibid.*, pp. 200-201.
36 *Ibid.*

fortification constructed prior to the outbreak of hostilities. Like most of the seacoast fortifications authorized by Congress following the War of 1812, Fort Macon had been built of brick and mortar and designed to resist naval bombardment. Construction had taken place between 1826 and 1834 when the fortification was first garrisoned. Because Fort Macon had not been adequately maintained during the two decades prior to secession, it had fallen into a state of disrepair. Confederate efforts to refurbish and rearm Fort Macon could not overcome the fact that any advantage masonry fortifications once offered had been undermined by subsequent developments in naval ordnance. The board had been quick to recognize that fact and previously pointed out the advantages of capturing Fort Macon and utilizing the protected harbor as a station for refuge, coaling and resupply. Another distinct advantage was that the inhabitants of the small fishing village of Beaufort were thought to be loyal.[37]

The Cape Fear River entrance to Wilmington would be a different matter entirely. Access from the Cape Fear River to the Atlantic was formed by two inlets geographically separated by Smith Island and Cape Fear Shoals. The main entrance to the Cape Fear was over the Western Bar between Smith Island and Oak Island. That was the traditional entrance to the Cape Fear and it had been fortified decades before the war. Fort Caswell on the eastern end of Oak Island was a masonry fortification similar in design to Fort Macon and constructed as a consequence of the same Congressional authorization. At Smithville inside the Western Bar, Fort Johnston also contributed to the defense of the port of Wilmington. Fort Johnston had been built during the Colonial Period and reinforced during the War of 1812. Although it afforded little protection, it served as headquarters of the Lower Cape Fear Defense System that ultimately included earthwork fortifications at Bald Head on Smith Island and batteries Campbell and Shaw on islands inside the river.

North of Smith Island, New Inlet provided a secondary entrance to the river through shifting bars. In their report, the board related that "the alarm of the people of Wilmington has led them to close New Inlet".[38] Although that received consideration, the Confederate Army had actually begun fortifying the north shore of the inlet. Fort Fisher on the north side of the inlet, would become the largest and most heavily armed earthwork fortification ever erected

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37 *Ibid.*, p. 201.
38 *Ibid.*

in the United States. On Zeke's Island on the south side of the inlet a powerful battery was also constructed. While the board suggested that closing New Inlet with obstructions would be easy, they conceded that unless Fort Caswell could be occupied or destroyed, obstructing the Western Bar would be difficult.[39]

While the board shifted their attention to the southern coast below Cape Romain, the United States Navy began the task of putting Lincoln's blockade into effect. Du Pont did not like the decision to divide blockade responsibilities among three squadrons, each under the command of a flag officer. He also expressed his concern about the British suggestion that it would be virtually impossible to effectively blockade the Confederacy. For Du Pont it was obvious that the U. S. Navy did not have to blockade every mile of the southern coastline. All that would be required was to blockade the ports of entry that were capable of accommodating foreign trade. Du Pont wrote that: "It is the intention of the government, I presume, to connect the shore between blockaded ports by light-draft cruisers to prevent the ingress of arms and contraband" and reasoned that maintaining an effective blockade would be "easily done, in my judgment, if the Navy Department and the flag officers understand their business."[40]

Unfortunately for the United States, establishing an effective blockade required considerably more than the understanding of U. S. Navy flag officers. At the time Lincoln announced his intention to blockade the entire southern coastline from Cape Henry, Virginia to the Rio Grande, the United States Navy was totally unprepared to accomplish the task. Most of the fleet were on foreign stations and those in home waters were almost entirely in the Gulf of Mexico. A complete list of ships in the United States Navy on 4 March 1861 was prepared for Congress by the Secretary of the Navy. That list identified a total of ninety-three vessels[41] including twenty-one vessels that were employed as receiving ships or stationary storeships, some that remained unfinished, others that were on the stocks for repairs and a few that had been determined impractical to repair. The sixty-nine remaining vessels that Secretary Welles identified in his estimate of the current "available force" included one ship of

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39 *Ibid.*

40 Du Pont to Henry W. Davis, 1 June 1861, *Du Pont, Civil War Letters,* Vol. 1, pp. 76-77.

41 "Report of the Secretary of the Navy", Navy Department 4 July 1861. United States Government Documents, Washington, D. C., 1862, pp. 85-86. Hereafter cited "Report of Secretary of Navy".

the line, eight frigates, twenty sloops of war, three brigs, three storeships, six steam frigates, five first-class steam sloops, four first-class side-wheel steamers, eight second-class steam sloops, five third-class screw steamers, four second-class side-wheel steamers and two steam tenders.[42]

However, only forty-two vessels; two frigates, eleven sloops of war, three storeships, one screw frigate, five first-class steam sloops, three first-class side-wheel steamers, eight second-class steam sloops, five third-class screw steamers, three second-class side-wheel steamers and one steam tender, were in commission and available for immediate service. That list also included the Stevens Battery, an ill-conceived armored vessel which had been under development for almost three decades.[43] Many of those vessels listed were on foreign stations.[44] In fact only three warships were on the Atlantic seaboard and four were on the Gulf Coast at the time Lincoln declared the blockade. Those vessels consisted of the screw sloop *Pawnee* at Washington, D. C., the steamers *Crusader* and *Mohawk* at New York and the frigate *Sabine*, sloop *St. Louis* and steamers *Brooklyn* and *Wyandotta* at Pensacola.[45]

When Flag Officer Garrett J. Pendergast, commander of the Home Squadron, issued a warning to Virginians and North Carolinians that he had a "sufficient naval force there for the purpose of carrying out the proclamation" he in fact had under his command the Potomac Flotilla, a force hardly sufficient to blockade Virginia's Chesapeake Bay shoreline and Hampton Roads.[46] Most of his vessels were large traditional warships without the speed to successfully chase blockade runners and with drafts too deep to operate in the vicinity of shallow southern inlets. Command of the squadron blockading the Atlantic was transferred to Flag Officer Silas H. Stringham on 1 May 1861.[47] Under Stringham's command were fourteen ships and the vessels of Commander James H. Ward's Potomac River Flotilla. Stringham's squadron consisted of the *Minnesota, Cumberland, Perry, Harriet Lane, Dawn,*

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42 "Report of Secretary of Navy", 1862, pp. 85-86.

43 U.S. Congress, House, Number of Vessels in the Navy, House Executing Document 159, 40th Congress, Second Session. 1868 and "Statement of the Number and names of vessels belonging to or connected with the Navy on the first of April 1861" Copy of Statement No. 1 called for by the House Resolution 6 January 1861. Mobilization and Demobilization, Subject File OL, RG 45, NA.

44 Soley, *The Blockade and the Cruisers*, pp. 13-14.

45 David D. Porter, *Naval History of the Civil War*, Castle, Secaucus, New Jersey, 1984, p. 36.

46 Garrett J. Pendergast to All Whom It May Concern, 30 April 1861, *ORN* , I, 4, p. 356.

47 Gideon Welles to Silas Stringham, 1 May 1861, *ORN*, I, 5, p. 621.

Monticello, Union, Reliance, Resolute, Daylight, Mount Vernon, Penguin, Albatross and *Wabash*. Those vessels included three large steam frigates, four traditional and virtually obsolete frigates, and seven recently purchased or chartered merchant steamers.[48] Stringham, unlike Flag Officer Pendergast, did not feel that he had sufficient vessels to establish the blockade and submitted a barrage of requests for twelve to fifteen additional vessels.[49]

In spite of the overall lack of sufficient warships and crews, by 29 June 1861, the number of ships under his command had increased to twenty-two. Those vessels were served by 3,300 officers and men and carried a total of 296 pieces of ordnance.[50] Many of the new vessels that were assigned to Stringham's command had been secured through an unprecedented effort to refit vessels in ordinary and an aggressive procurement program initiated by Secretary Welles. Although efforts to launch and commission eight warships authorized by Congress prior to the attack on Fort Sumter were redoubled, it was apparent that the new sloops of war would not begin to fill the Navy's requirements. In addition, all of the new vessels were large traditionally designed deep draft steam auxiliaries of which the USS *Kearsarge* was a good example. After the outbreak of hostilities, construction of eight additional warships was authorized. Those vessels were also traditional sloops of war of even larger dimensions. Although powerful, they were not well suited for duty on the blockade as they could not operate in shallow water and did not have the speed necessary to run down fast steamers.[51]

The warships did however reflect the naval philosophy Secretary Welles adopted at the on-set of the war. Although acutely aware of the criticism to which he would be subjected if he advocated the construction of "large and expensive vessels", Welles was convinced that powerful warships were the most effective agents of peace. He was afraid that he would be "denounced for being unprepared" if the Navy was not ready to suppress the rebellion and to defend the United States in the event of a war with England or France. "A few

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48 Welles to D. Stringham, 17 May 1861, *ORN*, I, 5, p. 635.

49 Stringham to Paulding, 24 May 1861, *ORN*, I, 5, p. 666.

50 Stringham to Welles, 29 June 1861, *ORN*, I, 5, pp. 753-754 and "Report of Secretary of the Navy", 4 July 1861.

51 Soley, *The Blockade and the Cruisers*, p. 18.

strong; powerful vessels will conduce to economy because they will deter commercial nations from troubling us, and if not troubled, we need no large and expensive navy."[52]

Welles quickly shifted his initial position concerning large and powerful warships as the necessities of the blockade and engagements on the shallow rivers and sounds of North Carolina and the Confederacy created the demand for fast and shallow draft vessels. Without waiting for congressional authorization, the Navy Department also contracted with private yards for the construction of twenty-three wooden gunboats. Those vessels were smaller shallow draft steamers of five hundred tons which carried auxiliary sails. Each of the vessels was fitted with a single cylinder steam engine and screw propeller. The "ninety-day gunboats" as they were called because of the speed with which they were constructed and fitted out for service, carried from four to seven guns. Their shallow draft and speed made them effective for both blockading and fighting.[53]

For service inshore and in the shallow estuaries and rivers of the Confederacy the U. S. Navy also contracted for the construction of a unique class of double-ended steamers. Although several hundred tons heavier that the "ninety-day gunboats" the "double-enders" were designed for shallow water operations. Their double ended design with a rudder at each end enabled them to navigate satisfactorily in either direction and eliminated the necessity for turning around in the restricted channels of southern rivers. Because of the success of the *Octorara* class, as the first twelve "double-enders" were identified, the Navy ultimately procured an additional 27 "double-enders" of larger capacity.[54]

Construction of new vessels contributed significantly to the dramatic increase in the United States Navy's capacity that was necessary to establish and maintain a blockade. However, vessels could not be built fast enough to accommodate the demands placed on the Navy. To relieve the pressure Welles initiated a crash program to charter and purchase any vessel that could

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52 Gideon Welles, *Diary of Gideon Welles*, Houton Mifflin Company, Boston and New York, 1911, p. 496.

53 Soley, *The Blockade and the Cruisers*, p. 19, Report of Secretary of the Navy, 1861, p. 14. David Switzer, "The Ninety Day Gunboats" an unpublished Ph. D. dissertation, University of Maine, 1968.

54 Soley, *The Blockade and the Cruisers*, p 19.

be adapted to serve the Navy's purpose.[55] Initially, charters provided a limited number of vessels for the Navy. In April 1861, Welles obtained the use of two steamers from Philadelphia and five from New York through charters. Those vessels included the powerful steamers *R. R. Cuyler, Huntsville* and *Keystone State* that were later purchased by the Navy. The monthly rate for the *R. R. Cuyler* was $12,500 and the rate for the *Huntsville* was $10,000. In May five additional vessels were leased including the steamer *Daylight* that was dispatched to blockade Wilmington. Leasing proved to be an expensive long-term proposition. In 1861, the bill for sixteen vessels leased for varying periods between April and November came to a total of $391,305.05.[56]

Welles realized leasing was neither a practical nor an economical approach to strengthening the Navy. Although leasing permitted vessels to be obtained on very short notice, Welles also moved quickly to establish a means of purchasing vessels. At first he focused on light draft steamers that could operate close to the shallow bars that characterized southern inlets and had sufficient speed to run down and capture "neutral unarmed blockade-runners."[57] Welles took care to point out to his detractors that small light draft steamers were not only the most economical and effective for establishing a blockade but, they could maintain station during adverse winter weather.[58]

The procurement program initiated by Welles to obtain commercial vessels was not without problems. The operation was extensively criticized for purchasing unsuitable vessels of poor condition that required expensive and frequent repairs and put officers and crews at risk. Welles was also criticized for paying high prices for many of the vessels his agents obtained. In spite of the criticism, the operations increased the available naval strength by seventy-nine steamers and fifty-eight sail by the end of December 1861.[59]

Chartering and purchase of vessels to support operations against the Confederacy was initially undertaken by the Navy. Commodore S. L. Breese, Rear Admiral Hiram Paulding, Rear Admiral Silas H. Stringham, Admiral Samuel F. Du Pont, Commodore C. K. Stribling, Commodore J. B.

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55 *Ibid.*
56 "Report of Secretary of the Navy", 1861, p. 14.
57 Welles, *Diary of Gideon Welles*, p. 497.
58 *Ibid.*
59 Soley, *The Blockade and the Cruisers*, p. 21.

Mongtomery, Captain H. S. Stellwagen, Captain W. L. Hudson, Commodore J. B. Hulland and Commodore J. G. Pendergast all negotiated vessel lease or purchase agreements on behalf of the United States Navy.[60]

During 1861, when expansion of the fleet was most critical, naval officers operated extensively out of Philadelphia and Baltimore. In Philadelphia Admiral Du Pont, Commodore Stribling and Commodore Pendergast purchased a total of sixteen vessels at a cost of $593,675. Du Pont and Pendergast negotiated the purchase of an additional three steamers for $172,300 in nearby Wilmington, Delaware in 1861. Commodore Stribling continued to operate out of Philadelphia throughout the war and purchased an additional thirty-one vessels costing $511,103. On 13 August 1861, Captain Stellwagen purchased fourteen schooners in Baltimore. The Baltimore schooners cost $14,300 and were to be loaded with stone and be employed as obstructions at Hatteras Inlet on the North Carolina coast.[61]

The overwhelming majority of vessels secured for naval use were obtained at New York. Although Commodore S. L. Breese negotiated the purchase of four vessels in New York in 1861 and Admiral David Dixon Porter and Rear Admiral John A. Dahlgren each subsequently purchased vessels the majority were obtained by Rear Admiral F. H. Gregory and Rear Admiral Hiram Paulding. Between May 1861, when Rear Admiral Paulding purchased the sidewheel steamer *Thomas Freeborn* and 30 December 1864 when Rear Admiral Gregory obtained the screw steamer *Spirea* the two officers secured a total of sixty-one ships at a cost of $4,532,422.[62]

Only ten of the vessels purchased in New York by naval officers were obtained in 1861. During 1861, the Navy relied almost entirely upon a civilian agent appointed by Welles who negotiated vessel purchases for the Navy. Welles felt that a merchant experienced in the shipping business could better serve the Navy than officers without extensive business experience. He and others also felt that it was important to avoid establishing a procurement system that stimulated undesirable competition among the Navy's agents. Welles selected a civilian agent with "a great business capacity and of the most scrupulous and unquestioned integrity" willing to relinquish "all private engagements, and withdrawing from all business connections of every

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60 Statistical Data of U. S. Ships, United States Vessels, *ORN*, II, 1, pp. 27-272.
61 *Ibid.*
62 *Ibid.*

description."[63] Welles selected his brother-in-law George D. Morgan to serve as the agent for the Department of the Navy. In spite of charges of nepotism and suggestions of corruption, Welles defended his decision before Congress and reported that "the very best vessels in the commercial marine have been secured for naval service at moderate rates, and to great advantage to the government."[64]

Initially Morgan and a board of inspection officers comprised of a naval contractor, ordnance officer and an engineer concentrated on securing steamers of moderate size and draft to facilitate enforcement of the blockade. Powerful, seaworthy and fast steamers such as the 1,128 ton *Quaker City*, the 1,152 ton *James Adger* and the 1,070 ton *Mercedita* were typical of the type determined to be immediately useful for service. As the number of steamers purchased began to relieve some of the pressure, Morgan and the board expanded their purchasing operations to include sail, steam tugs and ferries. Although sailing vessels were not at all suited to establishing the blockade, Welles proposed to employ them to act as colliers and to transport supplies for the steamers engaged in blockading the Confederacy.[65]

The survey and purchase of vessels for the Navy did not entirely solve the problem faced by Welles. Many of the surveys carried out by boards consisting of a naval constructor, an ordnance officer and an engineer identified deficiencies in the vessels offered for sale to the Navy.[66] Some purchases received board approval contingent upon the owner's willingness to rectify problems and make specified repairs. Surveys confirmed that most of the commercial vessels procured by Morgan, Forbes, Chappell and the Navy's procurement officers required some combination of service, repair and adaptation for military service. On 12 April 1861, Fox telegraphed Captain W. L. Hudson to confirm that owners should be responsible for caulking and other maintenance of repairs necessary to make their ships seaworthy. Fox acknowledged that "all the strengthening for guns & accommodation for stores should be done by the U. S."[67] To carry ordnance most merchant vessels required some strengthening of the deck and the construction of magazines

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63 "Report of Secretary of the Navy", 4 July 1861, p.14.
64 *Ibid.*, p.15
65 *Ibid.*
66 Morgan to Welles, 29 November 1861, NA, Navy Subject File, Box 124-131, AY.
67 G. V. Fox to W. L. Hudson, 12 April 1861, *Ibid.*

and shot lockers. The limited quarters of merchant ships were rarely sufficient for the full complement of officers and crew that would be assigned to a naval vessel.[68] In spite of the efforts of Morgan and the officers inspecting merchant vessels, many were sent to the fleet without being ready for the taxing service they were expected to render. Many vessels like the USS *Daylight*, the first vessel on the Wilmington station, were constantly in need of repair.

The massive effort Welles initiated to secure additional vessels for the Navy proved to be a success. By the end of 1861, the number of vessels available for naval service had increased to 264. However, the lack of sufficient vessels was not the only problem confronted by the United States Navy in 1861. By July, two hundred and fifty-nine officers resigned their commissions or were dismissed from naval service.[69] Initially, the lack of sufficient officers forced the Navy to send ships to sea without a full crew. The problem was in part resolved by volunteers, many with previous naval experience, who patriotically tendered their services. Most were offered the rank of acting lieutenants, masters and masters' mates and served in capacities that included those of junior officers aboard warships and as captains of gunboats and support vessels.

The necessity for additional surgeons and paymasters, well beyond the number authorized by Congress, was likewise temporarily resolved by Welles by appointing acting officers.[70] To prepare them for naval service, schools of gunnery and naval training were established at the Navy Yards. There each acting officer was schooled by naval instructors.[71] Passage of legislation authorizing the increase in enlisted men and the establishment of naval rendezvous at each of the principal northern seaports permitted the Navy to recruit enough seamen to man the newly commissioned vessels.[72] The number of seamen increased dramatically from 7,600 in March 1861, to 22,000

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68 O. S. Glisson to Stringham, 30 July 1861, Subject File AD, RG 45, NA.
69 "Report of Secretary of the Navy", 4 July 1861. p.92.
70 *Ibid.* , p. 95 and David D. Porter, *Naval History of the Civil War*, p.37.
71 *Ibid.*
72 "Report of Secretary of the Navy", 4 July 1861. pp. 92-93.

in December.[73] By December 1863 that number had increased to 38,000 and by the end of the war 51,000 enlisted men were serving in the Union Navy.[74] The ranks of naval officers increased from 1,300 in 1861 to 6,700 in 1865.[75]

The personnel problems that Welles faced were also complicated by a stagnant system of advancement spawned by years of neglect and marginal congressional support. Only the brief and limited revitalization of the Navy that occurred in conjunction with the Mexican War interrupted the cycle of neglect that followed the War of 1812. The muster roles of the Navy were filled with aging officers who had long since abandoned hope of promotion but held tenaciously on to their station. Young officers seeing no hope of advancement had taken leave or resigned to accept more promising positions in the merchant marine.[76] Welles recommended an extensive reorganization of the service to resolve the problem.

On 21 December 1861, additional legislation was enacted to facilitate streamlining the system of advancement and retirement. Officers listed on the Naval Register for fifty-five years or more, or who had reached the age of sixty-two were to be retired from active service. That legislation cleared the ranks of many aging and inept officers and permitted the advancement of more competent and aggressive personnel.[77] The act to "establish and equalize the grade of line officers" also directed the Secretary of the Navy to appoint an advisory board of senior officers to review and examine the list of active line officers at or above the grade of master and inform the Secretary of those "worthy of promotion." Although the new system and the legislation that created it was not without problems, it did stimulate a much needed expansion of the officer corps and created a progressive system of advancement.[78]

In addition to difficulties associated with vessels and personnel the Navy Department faced a number of other problems associated with establishing and maintaining a blockade of the Confederate coastline. The vessels deployed to intercept southern commerce required a complex and extensive base of

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73 David D. Porter, *Naval History of the Civil War*, p. 37.

74 Browning, R. M., "From Cape Charles to Cape Fear", unpublished doctoral dissertation, University of Alabama, 1988, p. 402.

75 Paullin, *Naval Administration*, p. 26.

76 David D. Porter, *Naval History of the Civil War*, p. 37.

77 Report of Secretary of the Navy, 1 December 1862, p. 39.

78 "Report of Secretary of the Navy", 4 July 1861, p. 95 and Porter, *Naval History of the Civil War*, p. 37.

logistical support. As the number of vessels increased and as more steamships were assigned to stations on the blockade, demands for supplies, munitions and repairs became more extensive. One of the issues addressed by the Blockade Strategy Board was identification of harbors that could be captured, defended and developed to serve as distribution centers and harbors of refuge and repair.[79]

Initially, the focus of that attention was on Hatteras Inlet on the North Carolina Outer Banks west of Cape Hatteras. Hatteras Inlet had previously been identified by the Strategy Board as an option for developing a harbor of refuge and coaling station. Hatteras Inlet became an unignorable priority by the first summer of the rebellion because of the success of privateers that began to base their operations there in 1861. Because the Confederacy had virtually no navy, President Jefferson Davis decided to issue letters of marque and reprisal to the owners of vessels willing to fit them out as privateers. On 17 April 1861, Davis issued a proclamation "inviting all those that desire, by service in private armed vessels on the high seas, to aid this government in resisting so wanton and wicked an aggression, to make application for commissions or letters of marque and reprisal to be issued under the seal of these Confederate States."[80]

During the spring and summer of 1861, the steam vessels of the North Carolina "Mosquito Fleet" initiated privateering operations based out of Hatteras Inlet. The tugs *Raleigh* and *Beaufort* and the sidewheel steamer *Winslow* made up the squadron. Under the command of Captain Thomas M. Crossan they began to conduct daily sorties to harass Union commerce passing Cape Hatteras.[81] They captured the brig *Lydia Frances* of Bridgeport, Connecticut, the bark *Linwood* of New York and the schooner *Willet S. Robbins*. In June the *Winslow* captured the schooner *Transit* chartered by the

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79 Blockade Strategy Board Minutes, 12 September 1861, Subject File ON, RG45, NA.

80 Richardson, James D., *A Compilation of the Messages and Papers of the Confederacy*, United States Publishing Company, Nashville, Tennessee, Vol.I, pp.60-61. Hereafter cited as *Messages and Papers of the Confederacy*.

81 William H. Parker, *Recollections of a Naval Officer 1841-1865*, Charles Scribner's Sons, New York, 1883, p. 211. William M. Robinson, Jr., *The Confederate Privateers*, Yale University Press, New Haven, 1928, pp. 103-104. *New York Herald*, 3 August 1861. Albert Kautz to Gideon Welles, 20 November 1861, *ORN*, I, 5, p. 744.

United States to transport munitions and provisions to Key West and the hermaphrodite brig *Hannah Balch,* a Union prize captured off Charleston. In July the crew of the *Winslow* captured the schooner *Herbert Manton.*[82]

Depredations of the "Mosquito Fleet" were curtailed somewhat when the vessels were transferred to the Confederate Navy, but the lucrative nature of their activity attracted privately commissioned vessels operating with letters of Marque and Reprisal from Jefferson Davis. One of the first was the pilot schooner *York* from Norfolk, Virginia. In spite of capturing two prizes, the *York* proved to be unsuccessful and had to be run aground to avoid being captured by the USS *Union.*[83] The *Mariner,* a small screw steamer from Wilmington, North Carolina captured the Union schooner *Nathaniel Chase* in July and the privateer steamer *Gordon,* out of Charleston, arrived at Hatteras with the brig *William McGilvery.*[84]

One of the first vessels to operate under a Letter of Marque and Reprisal was the brig *Jefferson Davis.* That vessel, previously the slaver *Echo,* had been armed with a pivot gun and four small carronades and fitted out in Charleston, South Carolina.[85] In July 1861, the *Jefferson Davis* began to harass Union shipping in the Atlantic off Cape Hatteras. In a report to Secretary Gideon Welles, Commander C. R. P. Rodgers of the United States Naval Academy related that the brig *Mary E. Thompson,* the brig *John Welsh,* the ship *Mary Goodell,* and the schooners *J. C. Warner* and *Enchantress* had been captured, looted and released.[86]

By August 1861, Hatteras Inlet had become a well established and highly successful base of operations against Union shipping. The success of those lightly armed and shallow draft privateers focused considerable attention on the North Carolina Outer Banks. On 9 August George W. Blunt conveyed a report from Captain Campbell of the brig *Lydia Martin* to Gideon Welles. Campbell provided Blunt with a description of the privateers and the defenses at Hatteras and Ocracoke Inlet.[87] A 9 August 1861 letter from representatives of

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82 William M. Robinson, Jr., *The Confederate Privateers,* Yale University Press, New Haven, 1928, p. 103. *New York Herald,* 3 August 1861. Albert Kautz to Gideon Welles, 20 November 1861, *ORN,* I, 5, p. 744 and Simeon Backus to Gideon Welles, 16 August 1861, *ORN,* I, 5, p. 744.

83 J. R. Goldsborough to S. H. Stringham, 10 August 1861, *ORN,* I, 1, pp. 60-61.

84 Robinson, *The Confederate Privateers,* p. 108

85 Report of Captain Hull, 13 July 1861, *ORN,* I, 5, p. 794.

86 Report of C. R. P. Rodgers to Gideon Welles, 12 July 1861, ORN, I, 5, pp. 793-794.

87 George W. Blunt to Gideon Welles, 9 August 1861, *ORN,* I, 1, p. 59.

the marine insurance companies of Philadelphia to the Secrétary of Navy, confirmed that off Cape Hatteras "the loss of property is and has been very heavy" and that "any project by which this nest of pirates could be broken up would be hailed with gratitude by all interested in commerce".[88]

The following day Lieutenant Thomas O. Selfridge described the situation to Secretary Welles:

> It seems that the coast of Carolina is infested with a nest of privateers that have thus far escaped capture, and, in the ingenious method of their cruising, are probably likely to avoid the clutches of our cruisers. Hatteras Inlet, a little south of Cape Hatteras light, seems their principal rendezvous. Here they have a fortification that protects them from assault. A lookout at the light-house proclaims the coast clear, and a merchantman in sight; they dash out and are back again in a day with their prize. So long as these remain it will be impossible to entirely prevent their depredations, for they do not venture out when men-of-war are in sight; and, in the bad weather of the coming season, cruisers can not always keep their stations off these inlets without great risk of going ashore.[89]

In a letter to Gideon Welles, Flag-Officer S. H. Stringham admitted that: "there seem to be nests of pirates who....require vigilant attention and some stringent action."[90] On 12 August a committee of the New York Board of Underwriters sent Welles a description of the Confederate defenses on the Outer Banks and included a plea for the "Government to prevent, as far as possible, any further captures by the pirates who sally out from those inlets".[91]

That pressure prompted Secretary Welles to order Flag-Officer S. H. Stringham to close all the North Carolina Outer Banks inlets except Hatteras. Hatteras would be developed as the harbor of refuge and supply identified by the Strategy Board. Welles authorized Stringham to prepare a Navy expedition to capture forts Hatteras and Clark at Hatteras Inlet. Likewise, General Winfield Scott authorized General Benjamin F. Butler to provide sufficient Army support for an amphibious expedition to occupy the forts.[92] On 26

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88 Marine Insurance Representatives to Gideon Welles, 9 August 1861, *ORN*, I, 1, pp. 59-60.
89 S. H. Stringham, to Gideon Welles, 10 August 1861, *ORN*, I, 6, p. 72.
90 Flag-Officer Silas H. Stringham to Gideon Welles, 10 August 1861, *ORN*, I, 5, p. 794.
91 New York Board of Underwriters to Gideon Welles, 9 August 1861, *ORN*, I, 1, pp. 59-60.
92 Gideon Welles to S. H. Stringham, 9 August 1861, *ORN*, I, 6, pp. 69-70.

August 1861, the expedition sailed from Hampton Roads, Virginia. Stringham's command consisted of the screw frigates *Minnesota* and *Wabash,* the sloop-of-war *Cumberland,* the screw sloop *Pawnee,* the paddle frigate *Susquehanna,* the steam gunboat *Monticello* and the revenue cutter *Harriet Lane.* The Army transports *Adelaide* and *George Peabody* carried the complement of 886 officers and soldiers of the Ninth and Twentieth New York Volunteer Infantry, the Second United States Artillery and the Union Coast Guard.[93]

The attack began on the morning of 28 August when the *Minnesota, Wabash, Cumberland* and *Susquehanna* steamed in and commenced shelling Confederate defenses at Fort Clark. An hour and a half after the naval bombardment began General Butler carried out an amphibious landing on the beach approximately two miles north of Fort Clark.[94] The Confederate defenders returned the fleet's fire but the range was too great for the caliber of the guns. Once their ammunition was exhausted the officers agreed that their most effective option was to spike the guns and retire to Fort Hatteras.[95] Shortly after 2:00 p. m. Union pickets entered the abandoned fortification and raised the Union flag. Two hours later the *Monticello* steamed into Hatteras Inlet to take possession of Fort Hatteras but, Confederate artillery opened an accurate fire on the vessel. The fleet immediately moved inshore and returned fire until sunset.[96]

On the following morning Stringham's vessels resumed their attack at 8 a. m. Although the Confederate batteries returned the Union fire, the range of their guns was not sufficient to have any effect. The Confederate strategy was to conserve their ammunition and await reinforcements but after enduring more than two hours of intensive shelling the decision was made to surrender.[97] At 11:10 the Union fleet observed a white flag on the parapet and ceased fire. General Butler took the tug *Fanny* into the Inlet and took possession of Fort Hatteras.[98] When Commander Henry S. Stellwagen's efforts to block Ocracoke Inlet by sinking a small fleet of schooners failed due to bad

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93 S. H. Stringham to J. E. Wool, 20 August 1861, *ORN,* I, 6, p. 108.
94 Report of S. H. Stringham, 2 September 1861, *ORN,* I, 6, pp. 120-123.
95 Report of Colonel William F. Martin, 31 August 1861, *ORN,* I, 6, pp. 140-142.
96 Report of S. H. Stringham, 2 September 1861, *ORN,* I, 6, pp. 120-123.
97 Report of Colonel William F. Martin, 31 August 1861, *ORN,* I, 6, pp. 140-142.
98 Report of S. H. Stringham, 2 September 1861, *ORN,* I, 6, pp. 120-123.

weather and a lack of local pilots, Stringham and Butler decided to garrison the forts and left Colonel Rush C. Hawkins in command of the forts and Commander Stephen C. Rowan in command of a small naval force to provide protection.[99] The capture and occupation of Confederate forts at Hatteras Inlet eliminated privateering off Cape Hatteras and provided the United States with an important base of operations for an invasion of coastal North Carolina.

As soon as Fort Hatteras was secure both General Butler and Flag-Officer Stringham departed for Washington, D. C. to revel in and take credit for their success. Aboard the USS *Susquehanna* off Hatteras, Captain J. P. Bankhead wrote G. V. Fox making reference to a joke circulating through the fleet concerning their "foot race North" and relayed the apparently general sentiment that the success at Hatteras Inlet should have been followed by an immediate attack on Confederate defenses at Beaufort, North Carolina. Bankhead, perhaps optimistically, felt that had "they both remained, we might have had the whole coast in our possession."[100] Another less sensitive critic wrote: "the enemy never had more faithful allies than they had in the brutal folly, supreme ignorance and want of ordinary military and naval perception of Como. Stringham and Gen. Butler...."[101] Criticism of the handling of the Hatteras Expedition subsequently forced Stringham to tender his resignation on 16 September 1861.[102] That cleared the way for Welles to create the North and South Atlantic Blockade Squadron recommended by the Strategy Board.[103] Flag-Officer Louis M. Goldsborough replaced Stringham until Flag-Officer S. F. DuPont was appointed to command the South Atlantic Blockade Squadron. Goldsborough remained in command of the North Atlantic Blockade Squadron.[104]

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[99] Commander H. S. Stellwagen to Flag-Officer L. M. Goldsborough, 11 October 1861, *ORN*, I, 6, p. 308; *Official Records of the Union and Confederate Armies*, I, 4, pp. 579-580, pp. 584-585, hereinafter cited as *ORA* and Benjamin F. Butler, *Autobiography and Personal Reminiscences of major-General Benjamin F. Butler*, Boston, A. M. Thayer & Company, 1892, pp. 285.

[100] Robert M. Thompson and Richard Wainwright, eds., *Confidential Correspondence of Gustavus Vasa Fox*, Naval History Society, New York, 1920, pp. 383-385.

[101] John D. Hayes and Lillian O'Brien, "The Early Blockade And The Capture Of The Hatteras Forts", *Journal of the Historical Society Quarterly*, Vol. 46, January 1962, p. 85.

[102] Flag-Officer Silas H. Stringham to Gideon Welles, 16 September 1861, *ORN*, I, 6, p. 217.

[103] Gideon Welles to Flag-Officer Silas H. Stringham, 18 September 1861, *ORN*, I, 5, pp. 231-232.

[104] Gideon Welles to Flag-Officer L. M. Goldsborough, 18 September 1861, *ORN*, I, 6, pp. 233-234.

One of Goldsborough's first priorities was to expand the Union presence in North Carolina. During the first week of December 1861, Goldsborough informed Fox that he would "give to blow of which you speak."[105] Goldsborough's proposal was to enter the North Carolina sounds at Hatteras with a combined Army and Navy amphibious force. Once his fleet was assembled, Goldsborough would capture Roanoke Island by assault. The island would serve as a base of operations to destroy the canals that connected the North Carolina sounds with Norfolk, Virginia and capture New Bern at the confluence of the Neuse and Trent rivers. With New Bern under Union control, the army could cut communication between the port of Beaufort and Wilmington and Weldon Railroad at Goldsboro. With Beaufort isolated it would be possible to launch a combined Army and Navy assault on Fort Macon or starve out the defenders.[106]

On 7 January 1862, Major-General McClellan provided Brigadier-General Burnside with instructions to join the expedition assembling at Fort Monroe and cooperate with Goldsborough in an invasion of North Carolina.[107] A fleet of more than 100 vessels had assembled off Fort Monroe by the first week of January. By 15 January, Goldsborough's seventeen vessels lay at anchor inside the bar although navigation of the inlet had been extremely difficult and dangerous.[108] In spite of Burnside's "absolute readiness" the army transports were not assembled inside Hatteras Inlet until the end of January. In addition to being poorly organized the army expedition was caught in a gale off Hatteras and three vessels, the *City of New York, Pocahontas* and *Zouave,* were lost.[109]

Burnside was finally ready to launch an attack on 5 February and Goldsborough's fleet steamed north up the sound in three columns. Two days later at 10:30 a.m. the Union gunboats engaged eight Confederate vessels, under the command of Flag-Officer W. F. Lynch. The Confederate flotilla was drawn up adjacent to a barricade of pilings and sunken vessels that stretched across the

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105 Thompson and Wainwright, *Confidential Correspondence of Gustavus Vasa Fox,* p. 207.

106 *Ibid.,* pp. 207-208.

107 *Ibid,* pp. 216-217 and p. 226.

108 L. M. Goldsborough to Gideon Welles, 23 January 1862, *ORN,* I, 6, pp. 526-527 and "Report of the Secertary of the Navy", 1 December 1863, p. 7.

109 L. M. Goldsborough to Gideon Welles, 23 January 1862, *ORN,* I, 6, pp. 538-539 and Ambrose E. Burnside, "The Burnside Expedition," Personal Narratives Of Events In The War Of The Rebellion, Being Papers Read Before The Rhode Island Soldiers and Sailors Historical Society, Second Series No. 6, Providence: N. Bangs Williams & Company, 1882, pp. 6-7.

sound from Pork Point on Roanoke Island to Red-Stone Point on the western shore. Although Lynch's command fought aggressively, the weight and range of Goldsborough's ordnance drove the Confederates north of the obstructions and damaged two of the vessels. Late in the afternoon, Lynch's flotilla closed with the Union fleet but withdrew when their ammunition ran low and headed to Elizabeth City in an effort to resupply.[110]

At the same time that part of Goldsborough's fleet was engaging the Confederate gunboats, other Union vessels shelled Fort Bartow, the Confederate fortification at Pork Point on Roanoke Island. By late afternoon, the Confederate battery fell silent and General Burnside launched a landing at Ashby's Harbor on the west side of the island. Using shallow draft steamers to tow a collection of small boats and bridge pontoons filled with troops, Burnside landed his army. By midnight approximately 10,000 men were ashore and making preparations for an early morning attack on Confederate positions.[111]

The following morning Burnside's army launched their attack, advancing up the middle of the island while Goldsborough's flotilla shelled Fort Bartow so heavily that the Confederates were forced to abandon the position. With assistance from Midshipman Porter and several naval boat howitzers, Burnside's force was able to overwhelm Confederate resistance and advance to the northern end of the island. Generals Burnside and Foster arrived aboard the USS *Philadelphia* at 7:15 p.m. and announced that the island was in Union hands and that 300 prisoners and 40 pieces of artillery had been captured.[112] On 9 February, Goldsborough dispatched Commander Rowan to Elizabeth City with thirteen gunboats to destroy Lynch's flotilla and curb navigation on the Chesapeake and Albemarle Canal.[113]

The capture of Roanoke Island and destruction of the Confederate flotilla left the North Carolina sounds in control of the United States. Without effective Confederate resistance the Navy and Army carried out a series of combined operations that resulted in the capture of New Bern on the Neuse River, Washington on the Pamlico River and Plymouth on the Roanoke River. With the exception of a Confederate attack on Plymouth and the fleet in the Albemarle Sound that was supported by the ironclad CSS *Albemarle* and

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110 Report of Flag-Officer W. F. Lynch, 18 February 1862, *ORN*, I, 6, pp. 594-596.
111 Report of L. M. Goldsborough, 18 February 1862, *ORN*, I, 6, pp. 550-553.
112 *Ibid.*
113 *Ibid.*, p. 590.

unsuccessful attempts to recapture Washington and New Bern, Union control was uncontested. In addition to depriving the Confederacy of one of its richest sources of agricultural products the invasion strangled most of northeastern North Carolina's water borne commerce.

Union control of the North Carolina sounds virtually eliminated both privateering at Hatteras and blockade running along the coast north of Cape Lookout. It also opened the way for capturing Fort Macon and the important Confederate harbor at Beaufort. Although eclipsed by the activities of Hatteras privateers, Beaufort had become an increasing source of irritation during the first year of the rebellion. In spite of Union vessels tasked with closing the port, blockade runners operated out of Beaufort with virtual impunity.

The John Frazer and Company ships *Alliance* and *Gondar* sailed into Beaufort in August 1861. The *Gondar* arrived with a cargo of railroad iron and salt and the *Alliance* carried "grindstones, quicksilver, castor oil, spool cotton, mackerel, tin plate, block tin, bar iron, sheet iron, iron wire, pig iron and two trunks of percussion caps."[114] While the blockade proved to be effective enough to keep the Frazer ships in port, on 28 February 1862 a steamer ran through the blockade and into Beaufort. That vessel was the *Nashville*, previously a Confederate commerce raider and source of considerable embarrassment for the United States Navy.[115] When the CSS *Nashville* arrived in Southhampton, she became the first Confederate warship to fly the Confederate flag in a British port.[116] Union embarrassment was amplified when, on 17 March, the *Nashville* steamed back out of Beaufort without incident.[117] Secretary of the Navy G. V. Fox admitted that the *Nashville*'s successful running of the blockade at Beaufort was "a terrible blow to our naval prestige" and called the episode "a Bull Run to the Navy."[118]

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[114] J. F. Armstrong to L. M. Goldsborough, 17 March 1862, *ORN*, I, 7, p. 131 and W. A. Parker to L. M. Goldsborough, 25 March 1862, *ORN*, I, 7, pp. 135-136 and Samuel Lockwood to L. M. Goldsborough, 3 May 1862, *ORN*, I, 7, p. 282.

[115] J. F. Armstrong to L. M. Goldsborough, *ORN*, I, 1, p. 332.

[116] Huse, *Supplies for the Confederate Army*, p. 33.

[117] G. A. Prentiss to L. M. Goldsborough, 30 September 1861, *ORN*, I, 6, p. 269 and W. A. Parker to L. M. Goldsborough, 25 March 1862, *ORN*, I, 7, pp. 136-137. Edward Cavendy to L. M. Goldsborough, 22 March 1862, *ORN*, I, 7, p. 138.

[118] G. V. Fox to L. M. Goldsborough, 27 March 1862, *ORN*, I, 9, pp. 277-294 and Thompson and Wainwright, *Confidential Correspondence of Gustavus Vasa Fox*, pp. 216-217 and pp. 226-227.

Escape of the steamer *Nashville* focused Union attention on the immediate capture of the harbor at Beaufort. The harbor was well protected by Fort Macon, a masonry fortification on Bogue Banks that was completed in 1833.[119] Fort Macon was never garrisoned and only four pieces of artillery had been mounted when Confederates occupied the fort after North Carolina left the Union in April 1861.[120] In September 1861, H. K. Burgwyn informed Secretary S. R. Mallory that:

> Fort Macon has not one practical gunner; has only forty reliable fuses, no rifled cannon, no ordnance officer, and only raw troops without proper supplies.[121]

Brigadier-General D. H. Hill wrote Secretary Mallory to confirm the untenable condition of Fort Macon in October pointing out that:

> Fort Macon cannot be held without 4 more efficient guns of long range. There are but 4 guns now of long range, and these are illy supplied with ammunition and are mounted on very inferior carriages.[122]

In spite of reports that Confederates were reinforcing Fort Macon, Goldsborough and Burnside realized that the casemated fortification was undermanned and poorly armed. Burnside used his base at New Bern to cut Beaufort, Morehead City and Fort Macon off from reinforcement. Morehead City, Carolina City and Beaufort were all occupied without resistance in March by General Parke.[123] That left Fort Macon completely isolated and cut off from reinforcement and supply. When Confederate Colonel Moses J. White refused General Parke's offer to "save the unnecessary effusion of blood" by surrendering, the Union general moved to isolate the fortification.[124]

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119 Daniel H. Hill, *Bethel to Sharpsburg*, 2 Vols., Edwards & Broughton Company, Raleigh, North Carolina, 1926, p. 247.
120 *Ibid.*
121 H. K. Burgwyn to S. R. Malory, 4 September 1861, *ORN*, I, 6, p. 721.
122 D. H. Hill to S. R. Malory, 18 October 1861, *ORN*, I, 6, p. 739.
123 Hill, *Bethel to Sharpsburg*, pp. 248-249.
124 John G. Parke to the Commander of the Garrison of Fort Macon, 23 March 1862, *ORA*, I, 9, p. 277 and Moses J. White to J. G. Parke, 23 March 1862, *ORA*, I, 9, p. 277.

On 29 March, a landing was effected on Bogue Banks. By April, Brigadier General John Parke reported that "every available hour of night and day was spent in transporting men, siege train, and supplies" to support the attack.[125] Three weeks later, on 25 April, Parke began to shell Fort Macon from the batteries erected on Bogue Bank. Although seas were too rough for Commander S. J. Lockwood's gunboats to effectively engage the Confederates, Parke's artillery was able to disable almost half of Fort Macon's artillery after ten hours of intense shelling. At 4:30 p. m. a white flag appeared above the ramparts and the following morning Colonel White and the garrison surrendered.[126]

When the vessels of the North Atlantic Blockade Squadron entered Beaufort after the fall of Fort Macon, it was immediately apparent to Commander Samuel Lockwood that the harbor would be an ideal base for repair and resupply. On 30 April, he wrote Goldsborough from Beaufort to confirm that:

> This would be a good place of deposit for coal, provisions, small stores, and lubricating oil, which is in constant demand by the engineer's department for the vessels stationed here and blockading off [Cape] Fear River, North Carolina.[127]

Goldsborough moved quickly to take advantage of the newly acquired facilities and, on 2 May, he informed Commander Lockwood that:

> I have this day ordered a thousand tons of coal to be sent from Philadelphia to Beaufort for the use of our vessels there and off Wilmington, and also a full supply of provisions, stores, and clothing to be sent from Baltimore to Beaufort for the same purpose. Tell the commanding officers of the *Chippewa* and *State of Georgia* that here-after they will find supplies at Beaufort, and direct them to inform the commanding officers they may meet off Wilmington that they, too, hereafter, are to go to Beaufort for supplies. In short, no vessel stationed at Beaufort or off

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125 J. G. Parke to Lewis Richmond, 9 May 1862, *ORA*, I, 9, p. 377.

126 J. G. Parke to Lewis Richmond, 9 May 1862, *ORA*, I, 9, p. 284.

127 Commander Samuel Lockwood to L. M. Goldsborough, 30 April 1862, *ORN*, I, 7, p. 292.

> Wilmington is to come here unless her condition is such as to render the move absolutely necessary, or unless she be ordered by the Navy Department or myself to do so.[128]

Although Beaufort and Morehead City had only limited facilities for storing supplies and ordnance, the Navy used vessels to serve as storehouses until improvements could be made in docking and warehouse facilities.[129]

The capture of Fort Macon was the last objective associated with Union plans to occupy and control coastal North Carolina from Cape Lookout to the Virginia border. Control of the North Carolina sounds completely eliminated the necessity for maintaining a blockade in the dangerous waters north of Cape Lookout. That significantly increased the number of vessels that could be assigned to blockade Wilmington and the shallow inlets in southeastern North Carolina. Even before the fall of Fort Macon, Goldsborough sent a communication to Commander G. A. Prentiss requesting that:

> Should Beaufort with Fort Macon fall into our possession, or should there be at any time more of our vessels off there than may be absolutely necessary to maintain the blockade and prevent the escape of the *Nashville*, I wish every steamer not needed, or that possibly can be spared, to go off Wilmington, N. C., and assist in blockading that port.[130]

When Goldsborough communicated his congratulations to Commander Lockwood for the successful capture of Fort Macon, he also ordered that the *Chippewa* and *State of Georgia* be dispatched to Wilmington "without delay" to strengthen the blockade.[131] Due to the lack of vessels that could be assigned to blockade Wilmington, that important port city had been able to carry on commercial activities almost without inconvenience. In fact, the establishment of a naval blockade at Charleston, South Carolina stimulated trade at Wilmington.

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128 L. M. Goldsborough to Samuel Lockwood, 2 May 1862, *ORN*, I, 7, p. 281.

129 Robert M. Browning, Jr., "From Cape Charles to Cape Fear: The North Atlantic Blockading Squadron During the Civil War." unpublished Ph. D. dissertation, University of Alabama, Tuscaloosa, Alabama, 1988, pp. 408-412.

130 L. M. Goldsborough to Commander G. A. Prentiss, 22 March 1862, *ORN*, I, 7, p. 156.

131 L. M. Goldsborough to Commander Samuel Lockwood, 2 May 1862, *ORN*, I, 7, p. 281.

In June William Guyer of Norwalk, Connecticut reported in a letter to the United States Treasury Department:

> When I left Wilmington, N C., three vessels had just arrived, one with a cargo of railroad iron from Cardiff, Wales; one with a cargo of molasses, from Cardenas; and one with a cargo of lime from Maine. The latter vessel was bound for Charleston, but finding that harbor blockaded, put into the port of Wilmington. When I left, no blockade was established off the Cape Fear River, and I have not seen any account of any since my arrival North. Unless Wilmington is blockaded, the blockade of Charleston Harbor is a practical nullity.[132]

Secretary Welles was well aware of the situation but instructions to Flag-Officer Stringham to station a vessel at Wilmington "provided it can be done without weakening other more important points" confirmed the more pressing priorities associated with the privateers at Hatteras Inlet and occupation of the North Carolina sounds.[133] It was not until October 1861, that three vessels were assigned to blockade the Cape Fear.[134] Until the fall of Fort Macon, Wilmington was blockaded by a combination of sail and steam vessels. While sailing ships could maintain their stations without the necessity for coaling and mechanical repairs, they were poorly suited to the task of running down fast sailors and virtually incapable of arresting steamers. Steamers, on the other hand, were more adapt at intercepting illegal traffic but required extensive time away from station to resupply and effect repairs at yards no closer than the Chesapeake Bay. Goldsborough informed Welles that:

> Fast steamers, of light draft, properly armed, are the only vessels fit for blockading our Southern coast. Sailing vessels, at best, are but of poor account-next to good for nothing on such a service. Steamers, as you are fully aware, must replenish their fuel frequently, and hence the necessity for a sufficient number to secure reliefs and keep up, as it were, a constant circulation. The accidents to which they are exposed and the time involved in their repair must also be considered.[135]

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132 William A. Guyer to Treasury Department, 25 June 1862. *ORN*, I, 5, p. 746.

133 Welles to Stringham, 14 June 1861, Area 8, Entry 463, RG 45, NA.

134 J. W. Livingston to Stringham, 15 August 1861, *ORN*, I, 6, pp. 85-86 and Goldsborough to Welles, 3 October 1861, *ORN*, I, 6, p. 282.

135 L. M. Goldsborough to Gideon Welles, 4 October 1861, *ORN*, I, 6, p. 286.

With those issues resolved and a new base of operations at Beaufort, Flag-Officer Goldsborough could make Wilmington the focus of sufficient attention to make the blockade effective.

Chapter II The Blockade of Wilmington and the Southeastern Coast

Until the steamer USS *Daylight* arrived off the Cape Fear on 14 July 1861, Wilmington, North Carolina's commerce suffered no restraint whatsoever. When the *Daylight* took up station the situation changed only marginally. Commander Lockwood quickly discovered that maintaining an effective blockade of the Cape Fear was not going to be accomplished without considerable resources. Two inlets at the entrance to the Cape Fear River provided vessels attempting to run the blockade with an important option for entering or departing Wilmington. To further complicate the situation Old Inlet to the south and New Inlet a few miles to the northeast were separated by Smith Island and Frying Pan Shoals which extended seaward more than twenty miles. When *Daylight* was in position to restrict navigation at one inlet the other was open. Commander Lockwood noted that vessels were able to observe his position off one inlet and escape through the other with impunity.[1] Lockwood's difficulties were compounded by breaking an eccentric strap. That forced him to abandon the Cape Fear blockade and return to Hampton Roads to make arrangements for repairs.[2]

Stringham ordered the *Penguin* to replace *Daylight* off Wilmington but that vessel proved to be almost as ineffective.[3] In August, Commander J. W. Livingston had reported that the vessel was unfit for outside cruising.[4] In spite of the vessel's condition, Commander Livingston tried to be more effective by remaining out of sight offshore during the day and cruising in the vicinity of the Cape Fear inlets at night so that his position would not be obvious to vessels running the blockade.[5] Livingston's strategy paid off on 11 August. The crew of the *Penguin* discovered the schooner *Louisa* of Wilmington crossing the south side of Frying Pan Shoals and gave chase. The *Louisa*

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1 Lockwood to Stringham, 16 July 1861, *ORN*, I, 6, p. 691 and Abstract Log of the U. S. S. *Daylight*, 17 July 1861, *ORN*, I, 6, p. 691.

2 Lockwood to Stringham, 28 July 1861, *ORN*, I, 6, pp. 42-43.

3 Stringham to Welles, 30 July 1861, *ORN*, I, 6, p. 43.

4 Stringham to Welles, 15 August 1861, *ORN*, I, 6, p. 267 and Livingston to Stringham, 16 August 1861, *ORN*, I, 6, p. 86.

5 J. W. Livingston to Stringham, 15 August 1861, *ORN*, I, 6, pp. 85-86.

refused to surrender and almost made Old Inlet before running aground and breaking up on a shoal. [6] The following day Livingston was forced to give up his station and return to Hampton Roads for coal and supplies.[7]

The assignment of three vessels, in September 1861, permitted both entrances to the Cape Fear to be guarded simultaneously.[8] Unfortunately, two of the three vessels assigned to the Cape Fear, the USS *Jamestown* and the USS *Gemsbok* were sail powered. Only the USS *Young Rover* was equipped with auxiliary steam power.[9] Commander Green wrote Goldsborough on 23 October to suggest that "two good steamers would, I think, secure pretty effectual the blockade of this place, by changing to the east or west side of the reef during heavy weather. They would still be in sight of both entrances and be secure, and able at once in a few hours to resume their position, which cannot be done by a sailing vessel...."[10] A fourth vessel, the bark *Amanda*, dispatched to Wilmington at the end of October provided another sail.[11] The arrival of the USS *Monticello* in November provided another steamer on the Wilmington station but the USS *Young Rover* was forced to return to Hampton Roads as the ship was unseaworthy, low on supplies and the crew was in need of winter uniforms.[12] In December the bark *Fernandina* and the steamers USS *Mount Vernon* and USS *Monticello* were also assigned to Wilmington.[13] On Christmas Day the *Fernandina* captured the Wilmington schooner *William H. Northrup*, 25 miles southeast of Cape Fear but the steamer *Gordon* passed through the blockade undetected.[14] Goldsborough informed Welles on 3 October 1861, that he felt there should be four active steamers "off or about" Wilmington to make the blockade effective.[15]

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6 *Ibid.*

7 *Ibid.*

8 L. M. Goldsborough to Charles Green, 28 September 1861, *ORN*, I, 6, pp. 260-261.

9 Distribution of Vessels Belonging to the Atlantic Blockading Squadron, 3 October 1861, *ORN*, I, 6, p. 86.

10 Charles Green to L. M. Goldsborough 23 October 1861, *ORN*, I, 6, pp. 353-354.

11 L. M. Goldsborough to N. Goodwin, 31 October 1861, *ORN*, I, 6, p. 380.

12 L. M. Goldsborough to D. L. Braine, 31 October 1861, *ORN*, I, 6, p. 417 and Charles Green to L. M. Goldsborough, 4 November 1861, *ORN*, I, 6, pp. 391-392.

13 L. M. Goldsborough to George W. Browne, 4 December 1861, *ORN*, I, 6, p. 463 and L. M. Goldsborough to O. S. Glisson, 7 December 1861, *ORN*, I, 6, p. 417 and L. M. Goldsborough to D. L. Braine, 16 December 1861, *ORN*, I, 6, p. 463.

14 L. M. Goldsborough to D. L. Braine, 31 October 1861, *ORN*, I, 6, p. 417 and Charles Green to L. M. Goldsborough, 4 November 1861, *ORN*, I, 6, pp. 391-392.

15 L. M. Goldsborough to G. Welles, 3 October 1861, *ORN*, I, 6, p. 267.

By the first of February 1862, Commander Glisson of the USS *Mount Vernon* reported that his was the only vessel on station off Wilmington in spite of the fact that the steamers *North Carolina* and *Gordon* were known to be ready to run out of Wilmington at the first opportunity. The USS *Gemsbok* had gone to Hampton Roads for repairs and the USS *Monticello,* and the recently assigned *Chippewa,* were both already there for repairs, coal and supplies.[16] Despite pressure for the USS *Monticello* and USS *Chippewa* to join the Roanoke Island expedition, Goldsborough was under pressure to reinforce Wilmington as both England and France were lodging "grave complaints against the effectiveness of our blockade". As he did not want vessels at Wilmington to escape and contribute to the international problems already apparent, Goldsborough ordered the USS *Chippewa* to return to Cape Fear as soon as possible.[17]

During February the *North Carolina,* renamed the *Annie Childs,* escaped without detection. In March she arrived in Liverpool with Confederate officers assigned to the commerce raider *Oreto* (*Florida*) and a cargo of 634 bales of cotton, 788 barrels of rosin, 215 3/4 and 10 1/2 boxes of manufactured tobacco, a box of peanuts and another of unidentified material. The cargo was consigned to Fraser, Trenholm & Company and that firm had a cargo of arms and munitions for the return voyage.[18] To make matters at Wilmington more embarrassing, the *Nashville,* renamed the *Thomas L. Wragg,* ran through the blockade on 24 April with a cargo of arms and powder, quickly loaded with cotton and returned to sea on 30 April.[19] At about the same time the steamer *Gordon* also escaped through the blockade.[20] Welles was furious and ordered a court of inquiry.[21]

Although the *Nashville*'s evasion of the blockade at Wilmington fueled criticism of the Navy, the presence of the CSS *Virginia* at Hampton Roads and the necessity for protecting newly occupied positions on the North Carolina sounds prevented reassigning vessels to blockade the Cape Fear. In May only six vessels had been assigned to the Wilmington Station. They were, however,

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16 O. S. Glisson to L. M. Goldsborough, 3 February 1862, *ORN,* I, 6, p. 545.
17 L. M. Goldsborough to A. Bryson, 19 February 1862, *ORN,* I, 6, p. 645.
18 Report of the U. S. Consul at Liverpool, 12 March 1862, *ORN,* I, 7, p. 217.
19 L. M. Goldsborough to Gideon Welles, 3 June 1862, *ORN,* I, 7, pp. 266-267 and L. M. Goldsborough to Gideon Welles, 13 May 1862, *ORN,* I, 7, p. 264.
20 Gideon Welles to L. M. Goldsborough, 3 June 1862, *ORN,* I, 7, p. 267.
21 *Ibid.*

all steamers; USS *Mount Vernon*, USS *State of Georgia*, USS *Monticello*, USS *Penobscot*, USS *Chippewa* and USS *Victoria* and their presence began to produce results.[22] At daylight on 22 May, the USS *Mount Vernon*, USS *State of Georgia* and USS *Victoria* found the steamer *Constitution*, previously the *G. Washington* of Albany, New York off Lockwoods Folly Inlet. Inspection of the vessel's papers confirmed enough inconsistencies to justify sending the vessel north for adjudication.[23] On the morning of 28 May, the USS *State of Georgia* and USS *Victoria* discovered another steamer heading east along the coast of Oak Island toward Fort Caswell. After several shots from the Union steamers the crew of the steamer abandoned the vessel. A boarding party found that the vessel was the *Nassau*, the "notorious" *Gordon*, owned by John Frazer and Company and carrying a cargo of Enfield rifles, ammunition, clothing and medicine.[24] The following month the USS *Cambridge*, only recently assigned to the Wilmington Squadron, chased the steamer *Modern Greece* ashore immediately north of Fort Fisher.[25]

Ten steamers had been assigned to the Wilmington Station by 24 July 1862, and the increasing number of captures and the destruction of blockade runners reflected their presence. Unfortunately, maintaining station proved to be difficult and it was rare that all ten vessels were off the Cape Fear. Coal was one of the most persistent reasons for vessels being absent. Different rates of use, periods of steaming and different bunker capacities made it difficult to coordinate coaling and reduce the number of times that more than one vessel was absent. After the capture of Fort Macon, coal could be obtained at Beaufort but that still required leaving the Cape Fear for several days. Admiral Lee ordered that:

> There must be a better system about coaling to avoid weakening the blockade. Only one vessel should be absent at a time. There must be no such custom as taking turns to go for coal.[26]

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22 Report of O. F. Glisson to Gideon Welles, 22 May 1862, *ORN*, I, 7, p. 409.
23 Report of J. F. Armstrong to Gideon Welles, 21 May 1862, *ORN*, I, 7, p. 406.
24 Report of L. M. Goldsborough to Gideon Welles, 21 May 1862, *ORN*, I, 7, p. 433.
25 Report of W. A. Parker to L. M. Goldsborough, 2 and 12 July 1862, *ORN*, I, 7, pp. 514-518.
26 S. P. Lee to B. F. Sands, 29 December 1862, *ORN*, I, 8, p. 331.

Coal was only part of the problem. Vessels of the Wilmington Squadron were also periodically absent to obtain supplies. During the summer of 1862, the *William Badger* was assigned to Beaufort to serve as a store ship. That vessel provided most of the non-perishable supplies and the steamer *Massachusetts* was assigned to provide fresh meat and produce to both the North and South Atlantic Blockading Squadron.[27] Not until August 1863, was the *New Bern* assigned to supply only the North Atlantic Blockading Squadron.[28]

Perhaps the most vexing problem was repairs. Many of the vessels assigned to the Wilmington Squadron had serious structural and/or mechanical problems. Carrying heavy ordnance created a dangerous situation on more than one vessel. Commander J. W. Livingston of the USS *Penguin* complained to Flag-Officer S. H. Stringham that:

> ....her boiler requires bracing fore and aft; it has already started 2 inches. Rock shaft wants lengthening to give it another bearing to support it. The cut-off eccentrics want keying on the shaft, in place of set screws which now hold them.

Livingston also reported:

> She bears her armament very well forward in smooth weather, but in a seaway the length and weight of metal outside when the guns are run out cause them to leap, guns and carriages, seaward in a fearful manner, independent of train tackle, so as to be almost uncontrollable and useless. Her hull seems in good condition up to her gun deck....but all above, including her upper-deck joiner-work, only intended to protect cargo from rain, is light, leaky, and insecure, and will inevitably be [swept] away in gales at sea. Her numerous hatches render her fires liable to be extinguished. Her stern frame and deadwood is very light and insufficient to protect her from the seas in her squatting, which is great and throw her propeller out of water. Her light sails and spars are too light for service in moderate weather; her storm sails are well, but are not secured in a proper manner; her stays are too light and the bolts are secured into light carlines, which must give way when the strain is brought on them; the stays have already fallen about our heads.[29]

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27 Gideon Welles to L. M. Goldsborough, 18 April 1862, *ORN*, I, 7, p. 428.

28 J. W. Smith to Gideon Welles, 19 December 1862, *ORN*, I, 7, pp. 470-471 and Browning, "North Atlantic Blockading Squadron," p. 71.

29 J. W. Livingston to S. H. Stringham, 16 August 1861, *ORN*, I, 6, pp. 86-87.

In February 1863, Captain B. F. Sands informed Acting Rear-Admiral S. P. Lee that:

> Of the paper steamers composing our force off Wilmington the *Penobscot* has been obliged to go north for repairs. The *Cambridge* ought to go, and is ordered north for repairs. The *Maratanza*, in heavy weather, is in danger of swamping with her heavy after pivot gun; and others are always complaining of deficiencies or inefficiency. This vessel even (probably the only or the most efficient one of them all) had her old boilers patched and stayed in New York in November last, to last for six weeks. By care and painstaking, especially due to Chief Engineer P. G. Peltz....we have not been obliged to go north for repairs, and hope to hold out until she can be spared to take in her new boilers, which await her at Boston, and for a general refitting in dock, etc. This is the condition of the blockade here.[30]

Making repairs to worn out or broken machinery were not always possible in Beaufort. Some could be made in Hampton Roads but, frequently more complex work required weeks in Washington, Baltimore, Philadelphia or New York where yard and machine shop facilities were available.

Rear-Admiral Goldsborough complained to Welles on 9 August 1862, that:

> The *Chippewa* has been a most prolific source of complaint ever since she first joined this squadron; and, beyond all doubt, justice was not done to her machinery originally. In my judgment, what is now required will not be properly done, except at one of our navy yards. Hence, one of the reasons which induce me to send her to Washington.[31]

In some instances the machinery of vessels on the blockade was not properly maintained and serviced, if not abused. After arriving at the Philadelphia Navy Yard, the boilers and machinery of the steamers USS *State of Georgia* and USS *Mercedita* were inspected and found to have been abused. The inspector of the USS *State of Georgia* found that the "oil holes and

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30 B. F. Sands to S. P. Lee, 10 February 1863, *ORN*, I, 8, pp. 518-519.

31 L. M. Goldsborough to Gideon Welles, 9 April 1862, *ORN*, I, 7, p. 637.

channels in the brasses clogged up with hard dirt--the condenser nearly filled with tallow--and a thickness of five inches of tallow and dirt was found in the air pump."[32]

By August the steamer *Kate* replaced the captured *Gordon/Nassau* as the major source of embarrassment for the United State Navy at Wilmington. Under the command of Thomas Lockwood the *Kate* began to run into and out of Wilmington with disturbing regularity. On 21 September S. P. Lee chastised Commander Gustavus H. Scott, the Senior Officer off Wilmington, for permitting the *Kate* to evade three vessels stationed off New Inlet. Lee pointed out that "the Department will be extremely mortified to hear that the *Kate* has run the blockade of Wilmington, out by New Inlet, with a load of cotton, an article now so valuable that a single cargo will purchase a large quantity of arms." Lee continued that; "I am informed that these steamers lie at anchor day and night, 5 miles off from the inlet and 2 miles from each other. I hope this is not so; if true, it will easily account for the escape of the *Kate*. The steamers should, between evening and morning twilight, shift their day berths and maintain positions just as near the bar as is safe and practicable." Lee pointed out that; "with a close cordon by night off the inlet by all the steamers, or with even one at anchor on picket duty, as near as possible to the bar, keeping the brightest sort of a lookout during the night, and the others anchored at their several night stations, convenient for watching and supporting the picket steamer, it is scarcely possible that the *Kate* could have escaped."[33]

The embarrassing success of the *Kate* motivated Lieutenant Bunce of the Gunboat USS *Penobscot* to propose a nocturnal raid to burn the steamer. Scott wanted to see the "miserable craft destroyed" and although he felt the chances of success were "too great to make the attempt with any certainty of success" he authorized the plan.[34] On 8 October, Lieutenant Bunce and a crew of volunteers attempted to take two boats from the *Cambridge* and another from the *Mystic* through New Inlet and attack the *Kate*. The expedition was abandoned because of heavy surf in the inlet. A second expedition was made

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32 Browning, "North Atlantic Blockading Squadron," p. 371.
33 S. P. Lee to Gustavus H. Scott, 21 September 1862, *ORN*, I, 8, p. 331.
34 G. H. Scott to W. A. Parker, 6 October 1862, *ORN*, I, 8, p. 153.

on 12 October but, it was also abandoned due to rough seas.[35] While the expedition was not successful Lee applauded the effort and considered it indicative of the "active and enterprising spirt" of the blockaders.[36]

Although not necessarily a result of the more aggressive strategy ordered by Lee and his threat of censure for failure to maintain a strict blockade, the British screw steamer *Sunbeam* was captured by the USS *State of Georgia* just after daylight on 28 September. The *Sunbeam*'s captain had been confused by the lights used by the blockade vessels to signal the Union Mail steamer *Massachusetts*. Before the British vessel could make the safety of Fort Fisher, the guns of the USS *State of Georgia* brought the vessel to a halt. Commander J. F. Armstrong confirmed that the *Sunbeam* was the same vessel identified in the 8 August 1862 report of the U. S. consul at Liverpool that had been circulated to the fleet.[37]

That consular report was the product of a complex system of intelligence gathering that had been developed to identify vessels fitting out in foreign ports to run the blockade. The backbone of the system was the United States diplomatic and consular service. The collection of useful information about the activities of Confederate agents abroad by agents of the Department of State convinced Secretary Seward of the intelligence gathering potential of his organization. Special instructions were issued to U. S. diplomats charging them with the responsibility for collecting naval as well as political intelligence. By August 1862, Secretary Seward had obtained authorization from Congress for President Lincoln to create new consulates for the purpose of collecting naval intelligence.[38] Agents in London, Liverpool, Glasgow, Paris, Nassau, Bermuda and Havana provided highly accurate insight into Confederate efforts to obtain political support, vessels and war materials. New consuls were appointed for Bristol, England; Cardiff, Wales; St. Johns, Newfoundland; and Prince Edward Island, Nova Scotia to help track the activities of Confederate vessels and blockade runners. Information from this system also included detailed descriptions of vessels, inventories of contraband

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35 F. M. Bunce to G. H. Scott, 16 October 1862, *ORN*, I, 8, p. 155.
36 S. P. Lee to G. H. Scott, 27 October 1862, *ORN*, I, 8, p. 155.
37 Report of James F. Armstrong, 28 September 1862, *ORN*, I, 8, p. 331.
38 United States Congress, Senate, Serial 1121, Senate Executive Document 12, 37th Congress, 2nd Session, Washington, Government Printing Office, 1862, pp. 1-5.

cargoes, sailing schedules and anticipated ports of call. United States consuls identified the owners, officers and crew members of many insurgent vessels and ships dispatched to run the blockade.[39]

Communications from foreign consuls were forwarded to the United States by steamship lines maintaining regular mail services.[40] At ports such as New York, Boston, Philadelphia and Baltimore, dispatch agents received the mail and forwarded them to Washington. Information of interest to the Navy was forwarded to the Navy Department. There letter press copies were made and the information was immediately dispatched to the blockade squadron commanders. Flag-Officer Louis M. Goldsborough set up a printing press on his flagship and printed extracts of the information he received from the consular dispatches. Those extracts were sent to the commander of each of the vessels in Goldsborough's squadron. Each extract identified and described vessels engaged in blockade running, schedules, officers and crew members and lists of their cargoes and in some cases markings used to identify the shipper or owner.[41] Rear Admiral S. P. Lee continued the practice of printing extracts and distributing them to the commanding officers of the North Atlantic Squadron. Lee regularly reiterated that ranking officers at Beaufort and Wilmington should "impress upon commanding officers the necessity of making themselves familiar with the contents of these papers."[42]

Intelligence from abroad helped identify vessels intending to run the blockade but, capturing them still remained difficult. Rear-Admiral Lee's orders to maintain "a close cordon by night" resulted in a 7 October collision between the steamers USS *State of Georgia* and USS *Mystic*. As a consequence, the USS *State of Georgia* had to leave her station for repairs. After being informed of the collision, Lee ordered that "vessels should have their regular

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39 United States Congress, House of Representatives, Serial 1136, House Executive Document 104, 37th Congress, 2nd Session, Washington, Government Printing Office, 1862, pp. 1-211 and Barnes and Morgan, United States Congress, House of Representatives, Serial 1136, House Executive Document 104, 37th Congress, 2nd Session, Washington, Government Printing Office, 1862, pp. 113-117. United States Congress, House of Representatives, Serial 1200, House Miscellaneous Document 77, 38th Congress, 2nd Session, Washington, Government Printing Office, 1862, pp. 1-11.

40 Domestic Letters of the Department of State, NA, Washington, 1959, Microfilm No. 40, Roll 51, pp. 469-473, 13 March 1861, Secretary Seward to Dispatch Agent Charles A. Stetson.

41 Navy Department, Record Group 45, entry 152, Department of Consular Letters and Letters to Squadron Commmanders by the Secretary of the Navy, Volume I, 9 November 1861, Secretary Welles to L. M. Goldsborough, NA, 1959, Microfilm No. 40, Roll 51, pp. 469-473, 13 March 1861, Secretary Seward to Dispatch Agent Charles A. Stetson.

42 S. P. Lee to G. H. Scott, 1 October 1862, *ORN*, I, 8, p. 101.

lights burning and covered with tarpaulin hoods, readily removed; also a lookout standing by each ready to uncover promptly in case of necessity, so that the course of each vessel may be quickly indicated." Lee also cautioned that "vessels returning at night, especially when looking for each other, and when the situation may have occasioned the other vessels previously lying at anchor to be underway, should move carefully; the officers should watch vigilantly."[43]

When Lee ordered Acting Volunteer Lieutenant J. Trathen to take the USS *Mount Vernon* to Wilmington to help maintain a "strict and rigid" blockade of the Cape Fear, he provided the most recent extracts from the diplomatic service and squadron, blockading instructions and copies of the general orders and circulars. Lee also provided copies of the "U. S. Navy laws passed at the last session of Congress" one of which was to be preserved in the cabin library and the other was to be hung up in a public place for "general reference." A copy of "Upton's Maritime Warfare and Prize" was also provided for the USS *Mount Vernon*.[44] Lee hoped to avoid both misunderstandings about the conduct of the blockade and legal complications associated with captured prize vessels.

Maintaining a close blockade became increasingly difficult as Confederates strengthened fortifications protecting entrances to the Cape Fear. On the morning of 11 October 1862, Commander Scott reported that "at 9:30 this morning the enemy opened upon us with two Armstrong guns from a battery which they had constructed during the night on the beach." Confederate gunners found their mark with a second shot which exploded in the USS *Maratanza*'s port quarter. Although the USS *Maratanza* got underway immediately another shell passed over the ship at a range of 4 1/2 miles. Scott informed Lee that it was no longer safe to maintain stations within 2 1/2 miles of Oak Island.[45] This made it more difficult to intercept vessels in the immediate vicinity of the inlet and U. S. vessels could only guard the bar under cover of darkness.

The eight steamers at Wilmington were not sufficient to curb the steamship traffic, but their presence had a dramatic impact on sailing vessels attempting to run the blockade. Vessels that previously ran the blockade

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43 *Ibid.*, p. 122.

44 S. P. Lee to J. Trathen, 9 October 1862, *ORN*, I, 8, p. 125.

45 G. H. Scott to S. P. Lee, 11 October 1862, *ORN*, I, 8, p. 127 and W. H. Macomb to S. P. Lee, 1 November 1862, *ORN*, I, 8, p. 125.

without much difficulty or risk began to shift their activities to unblockaded inlets west of Old Inlet and north of New Inlet. Traffic at Shallotte Inlet increased to the point that the USS *Penobscot* was assigned to interrupt that activity in October 1862. On 2 November, that vessel discovered the English schooner *Pathfinder* near shore approximately two miles west of Little River Inlet. The crew of the schooner abandoned the vessel after the USS *Penobscot* opened fire and the *Pathfinder* drifted ashore. A prize crew from the *Penobscot* was unable to get the *Pathfinder* off and the vessel and her cargo were burned.[46]

The following morning the USS *Daylight* discovered the British bark *Sophie* of Liverpool lying at anchor immediately south of Masonboro Inlet. The crew of the *Sophie* made sail as soon as they were discovered and headed the bark toward the beach. Prize crews from the USS *Daylight* and USS *Mount Vernon* attempted to get the bark off, but rough seas drove the vessel hard aground. Although a crew from the USS *Mount Vernon* was able to set the *Sophie* on fire all but one of the boats sent to the wreck were driven ashore. When darkness made it impossible for the guns of the USS *Daylight* and USS *Mount Vernon* to protect the boat crews, they were captured by Confederate cavalry and infantry. During the night a company of artillery from Fort Fisher set up several rifled field pieces and the following morning drove the Union vessels away.[47]

On 6 November, the USS *Mount Vernon* returned to Masonboro Inlet and discovered another bark and a schooner close along the shoreline. After it was apparent that the USS *Mount Vernon* intended to approach, both ships were run ashore near the remains of the *Sophie*. Both crews escaped ashore and the vessels were pounded to pieces in the surf.[48] Yet another schooner was discovered off Masonboro Inlet by the USS *Cambridge* on the morning of 17 November. That vessel was also driven ashore and burned by a party from the USS *Cambridge*. After their boat swamped, the boarding party was captured on the beach by Confederate infantry.[49] The English captain of the schooner and three Negro crew members were sent by Brigadier-General W. H. C. Whiting to

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46 J. M. B. Clitzto to S. P. Lee, 3 November 1862, *ORN*, I, 8, p. 190.

47 A. J. Trathen to W. A. Parker, 5 November 1862, *ORN*, I, 8, p. 194; A. E. Barnett to J. D. Warren, 5 November 1862, *ORN*, I, 8, p. 195 and J. D. Warren to W. A. Parker, 5 November 1862, *ORN*, I, 8, pp. 197-198 and T. M. Peakes to Gideon Welles, 2 December 1862, *ORN*, I, 8, p. 199.

48 James Trathen to W. A. Parker, 20 November 1862, *ORN*, I, 8, pp. 199-200.

49 W. A. Parker to G. H. Scott, 17 November 1862, *ORN*, I, 8, pp. 214-215.

Charleston so that they could all make their way back to Nassau.[50] That same day the USS *Daylight* drove a small brig into the surf at New Inlet before being driven away by the guns of Fort Fisher.[51]

At Shallotte Inlet, the crew of the USS *Monticello* discovered two schooners the following day. The first proved to be the *Ariel* of Halifax. That vessel was run ashore by her crew and was burned by boarding parties from the USS *Monticello*. Before the *Ariel* could be destroyed the USS *Monticello* noticed a second schooner along shore to the west of Shallotte Inlet. That vessel was the *Ann Maria* of Nassau. After being run ashore, she was towed off by the USS *Monticello* but, sank as a consequence of damage from grounding. Both of the vessels were loaded with bags of salt and contained a few kegs of lard and barrels of sugar and flour.[52]

While only one steamer had been captured and two destroyed, the blockade was clearly making trade in traditional sailing vessels more difficult. Out of the fifty-five vessels assigned to the North Atlantic Blockade Squadron by December 1862, six were assigned to the Wilmington Station.[53] On 5 December Rear-Admiral Lee informed Gideon Welles that since the first of September a total of twenty vessels had been captured or destroyed in attempting to enter Wilmington or one of the shallow inlets north and west of the Cape Fear. In addition to the steamer *Sunbeam*, two barks, two brigs and fifteen schooners had been intercepted.[54] The total value of those sailing vessels and their cargoes was inconsequential compared to the goods shipped through the blockade during the same period on steamers. Perhaps the best news that Lee conveyed to Welles in December was notice of the loss of the Confederate steamer *Kate*. While Lee could take no credit for the *Kate*'s destruction, news that the steamer had run on obstructions in the Cape Fear and sank was welcome.[55]

News of the destruction of the *Kate* was also overshadowed by November reports from the United States consuls in Liverpool and Glasgow. Intelligence from both of those centers of British shipping and shipbuilding

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50 Report of W. H. C. Whiting, 19 Novemebr 1862, *ORN*, I, 8, p. 216.
51 J. D. Warren to G. H. Scott, 17 November 1862, *ORN*, I, 8, pp. 216-217.
52 D. L. Braine to S. P. Lee, 18 November 1862, *ORN*, I, 8, pp. 219-220.
53 Report of S. P. Lee to B. F. Sands, 4 December 1862, *ORN*, I, 8, pp. 257-258.
54 Report of S. P. Lee to Gideon Welles, 5 December 1862, *ORN*, I, 8, p. 259.
55 Report of S. P. Lee to Gideon Welles, 5 December 1862, *ORN*, I, 8, p. 260.

confirmed that British and Confederate agents were focusing their efforts to run the blockade almost entirely on fast steamers. On 14 November, the consul in Liverpool reported that:

> The Confederates and their friends in this country are making rather formidable preparations for operations at sea and to get supplies into Southern ports. Besides the boats they have in ports in different parts of the West Indies, on the way across and in the ports in Europe ready and preparing to leave, they have quite a number building. They have recently been buying all the fast vessels-steamers-they can find for sale, and are now in treaty for three of the very fastest and best boats that have been built in England. They are new, all alike, 480 tons each, and built to run between Dover and Calais. They are side-wheel, built in the best possible manner, covered with steel plates instead of iron, and are very fast and of light draft of water, and are wanted to run in with cargoes from Bermuda and Nassau.[56]

Similarly, the consul in Glasgow reported that:

> Glasgow is now the great resort of Southern emissaries for the purchase and outfitting, and also for the building, of iron steamers, either to run the blockade as merchant vessels or to ravage the seas as ships of war.[57]

In addition to procuring a fleet of fast steamers to conduct business through the blockade, Confederates began to extensively reinforce fortifications protecting the entrances to the Cape Fear. Fort Caswell on Oak Island and Fort Johnson at Smithville had been occupied by North Carolina troops in April of 1861.[58] Under the direction of Major W. H. C. Whiting those fortifications were quickly made operational and rearmed.[59] After the fall of fortifications at Hatteras Inlet and the invasion of the North Carolina sounds, Brigadier General J. R. Anderson was assigned to develop the defenses of the lower Cape

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56 Extracts from Consular Reports Received from Navy Department, 8 December 1862, by S. P. Lee, *ORN*, I, 8, pp. 266-269.

57 Extracts from Consular Reports Received from Navy Department, 8 December 1862, by S. P. Lee, *ORN*, I, 8, pp. 267-268.

58 J. Person to John Cantwell, 15 April 1861, Scrapbook, Cantwell Papers, North Carolina Division of Archives and History, Raleigh, N. C. Hereinafter cited as NCDAH.

59 W. H. C. Whiting to P. G. T. Beaureguard, 27 April 1861, *ORA*, I, 1, pp. 486-487.

Fear.[60] Under Anderson the District of Cape Fear was formed. His command consisted of 209 officers and approximately 4,000 enlisted men. The defenses of the Cape Fear consisted of Fort Caswell, with a garrison of 384 men, Fort Johnson, with a garrison of 443 men and several small batteries constructed on Confederate Point that were manned by 86 men.[61]

Confederate Point was the weakest of the Cape Fear defenses and after Colonel William Lamb was assigned to command the garrison in July 1862 work on improving the defenses continued without interruption.[62] By December 1864, Fort Fisher had become the "Malakoff of the South" with a land face extending 682 yards across the Confederate Point peninsula and a sea face 1,898 yards long extending south to the Mound Battery. Fort Fisher was ultimately equipped with more than forty heavy pieces of ordnance that included a 130-pdr Armstrong and a 170-pdr Blakely rifle.[63] In February 1863, Commander A. L. Case reported the Confederates were "working like beavers in adding to the defenses of New Inlet." Case also informed S. P. Lee that the Federal Point light had been torn down and the brick used in the construction of shot furnaces in the new batteries. He also confirmed that the rebels under Colonel Lamb's command were using steam machinery to lift sand used in the construction of the earthworks.[64] Another large earthwork, Fort Anderson, was constructed on the west bank of the Cape Fear River five miles above Fort Johnson.

The Blockade Strategy Board recommended the capture of Wilmington in 1861. However, not all their recommendations were acted upon by the United States Navy. Other strategic priorities undermined several proposals to capture the Cape Fear fortifications and close the Port of Wilmington. After the capture of Hatteras Inlet and Roanoke Island, the Navy focused on capturing the principal coastal towns accessible to the sounds instead of Wilmington. In December 1863, Admiral Lee complained to Welles that:

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60 Samuel Cooper to Joseph R. Anderson, 3 September 1861, *ORA*, I, 4, p. 639.

61 Troop Abstract, Department of North Carolina, September 1861, *ORA*, I, 9, p. 662.

62 William Lamb, "Defense of Fort Fisher, North Carolina," The Military Historical Society of Massachusetts, 14 Volumes, Boston, Vol. 9, p. 350.

63 William Lamb, "Colonel Lamb's Story," pp. 1-5 and Sprunt, *Chronicles of the Cape Fear*, p. 381.

64 A. L. Case to S. P. Lee, 13 February 1863, *ORN*, I, 8, pp. 525-526.

The capture of Hatteras Inlet and their vessels put a stop to the rebel depredations from that quarter on our commerce. The easy capture of Fort Macon gave us the possession of Beaufort Harbor; thus we had all the seacoast of North Carolina, except Wilmington, the capture of which was as easy then as difficult now, and the army then had there many vessels and boats suitable for the transportation required. But the complete acquisition of the seacoast was abandoned in favor of the sound towns.[65]

In May 1862, the Navy Department suggested that Goldsborough attempt to capture Fort Caswell but, before he could initiate an attack countermanding orders arrived instructing the Admiral to abandon any assault on the Cape Fear fortifications.[66] When McClellan's campaign to capture Richmond by advancing up the peninsula between the York and James rivers failed, the Navy shifted the focus of its attention to Charleston for the "fall of Charleston is the fall of Satan's kingdom."[67] When S. P. Lee took command of the North Atlantic Blockade Squadron he resumed planning for an attack on the Cape Fear fortifications. The success of Lee's plan was contingent upon the use of ironclads to reduce Fort Caswell and once in command of the river, to attack Fort Fisher from the rear. Although Fox felt that the rate of fire of the monitors was too slow to effectively reduce Fort Caswell, the Navy proceeded with plans to close Wilmington. Planning for the attack continued until the end of December when the USS *Monitor* was lost in a gale off Cape Hatteras.[68] Loss of the *Monitor,* according to Gustavus Fox, was credited with "breaking up the whole affair."[69]

Welles felt it best to "push on to Charleston and strengthen Du Pont" for an attack on those fortifications. He and Fox continued to promise Lee light draft monitors that could be employed in an attack on Wilmington but none were delivered.[70] Ultimately, the proposed attacks on Fort Fisher and Fort

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65 S. P. Lee to Gideon Welles, 22 December 1863, *ORN*, I, 9, pp. 370-371.

66 Gideon Welles to L. M. Goldsborough, 13 May 1862, *ORN*, I, 7, pp. 348-349.

67 G. Fox to S. Du Pont, 3 June 1862, *Du Pont Letters*, Vol. 2, p. 97.

68 S. P. Lee to G. Welles, 3 January 1863, *ORN*, I, 8, p. 339.

69 G. Fox to S. Du Pont, 11 March 1863, *Du Pont Letters*, Vol. 2, p. 486.

70 Beale, *Welles Diary*, 5 January 1863, Volume I, p. 216; G. Welles to S. P. Lee, 13 January 1863, *ORN*, I, 8, p. 420; Gideon Welles to S. P. Lee, 13 January 1863, *ORN*, I, 8, p. 420 and G. Fox to S. P. Lee, 12 Febuary 1863, *ORN*, I, 8, p. 383.

Caswell were abandoned in favor of a plan to land troops on Smith Island.[71] When sufficient army support for the operation could not be obtained, that proposal was also abandoned.[72] In May, Lee confided to Welles that he did not feel that "a purely naval attack can succeed in getting possession of either or both entrances to Wilmington." For Lee the "difficulties of attack and the shoalness of the water on the bars and in the entrances to the Cape Fear River make the difficulty greater at Wilmington than at Charleston." He was also acutely aware of the "strength and extent of defenses" the Confederates had developed by the spring of 1863.[73]

The strength of Confederate fortifications and the difficulties associated with navigating the inlets under fire prevented a Union attack to close the Cape Fear, but the strength of the Cape Fear Blockade Squadron was periodically increased. By mid-January 1863, the number of steamers blockading off the Cape Fear had increased to fifteen.[74] One of those vessels was the *Columbia*, the first captured blockade runner assigned to help maintain the Wilmington blockade.[75] The *Columbia* had been captured off the coast of Florida by the USS *Santiago de Cuba*, condemned as a prize and purchased from the Key West Prize Court by the U. S. Navy.[76] After being converted for use as a gunboat the USS *Columbia* was assigned to the Cape Fear Blockade Squadron. The screw steamer was also the first blockade ship to be lost off the Cape Fear.

Late in the afternoon of 14 January 1863, the USS *Columbia* was headed in towards Masonboro Inlet. As the vessel approached the shore in the gathering darkness, it grounded in breaking water. Unable to back the vessel off, the crew attempted to lighten ship by throwing coal and ballast overboard. Their attempt failed. On the morning of 16 January a southeasterly gale drove the vessel closer in to shore. As a last resort the guns were spiked and thrown overboard and the foremast was cut away. By the morning of the 16th, Confederates had set up a battery on the beach and drove off the USS

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71 S. P. Lee to G. Welles, 30 March 1863, *ORN*, I, 8, p. 575 and A. L. Case to S. P. Lee, 23 May 1863, *ORN*, I, 9, p. 50.

72 J. Foster to S. P. Lee, 25 April 1863, *ORN*, I, 8, p. 826.

73 S. P. Lee to G. Welles, 10 May1863, *ORN*, I, 9, p. 14.

74 S. P. Lee to G. Welles, 15 January 1863, *ORN*, I, 8, p. 438.

75 S. P. Lee to G. Welles, 30 December 1862, *ORN*, I, 8, p. 338.

76 Charles R. Haberlein, Jr., "Former Blockade Runners in the United States Navy," unpublished research paper, Kalamazoo College, Kalamazoo, MI, 1965, p. 146.

Cambridge and USS *Penobscot* attempting to assist the crew of the USS *Columbia*. The following day Confederates set fire to the wreck and the vessel was completely destroyed.[77]

Loss of the USS *Columbia* at Masonboro Inlet was a consequence of Union efforts to curb blockade running through a series of small inlets along the North Carolina coast north and west of the entrances to the Cape Fear. The increase in United States vessel strength off New and Old Inlet shifted some activity to those unguarded but navigable inlets. Numerous schooners had been discovered in the vicinity of Masonboro and Shallotte Inlets and steamers had begun to put both passengers and cargoes ashore at those more remote locations. On 29 December 1862, Acting Volunteer Lieutenant E. Hooker of the USS *Victoria* reported discovering a steamer off Little River South Carolina.[78] Hooker described the vessel as "very rakish" with "dark-colored paint" and indicated that he was "confident that the steamer communicated with the land."[79]

Three months later, on 21 March 1863, the crew of the USS *Victoria* and the blockade schooner *William Bacon* found another steamer off Little River. The vessel proved to be a "large side-wheel steamer, without masts, except a lower foremast, painted lead color...." The USS *Victoria* gave chase and after firing a half-dozen shots the steamer hove to and hoisted English colors. The vessel proved to be the *Nicolai I* from Nassau with a cargo of dry goods, arms and ammunition. After being driven away from Charleston, the captain of the *Nicolai I* decided to attempt to enter Little River or Wilmington.[80]

Extending the blockade to those shallow inlets in the vicinity of the Cape Fear had an impact on the blockade running activity. Small schooners and brigs that had carried on an extensive trade with the Bahamas and West Indies through those inlets were captured or destroyed in increasing numbers making the trade extremely dangerous. Capture of the *Nicolai I* demonstrated that steamers attempting to trade through those inlets were also clearly at risk in spite of their speed. As the blockade tightened, blockade runners shifted the

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77 J. S. Williams to S . P. Lee, 21 January 1863, *ORN*, I, 8, pp. 423-424.
78 E. Hooker to B. F. Sands, 29 December 1862,*ORN*, I, 4, p. 336.
79 E. Hooker to C. S. Boggs, 21 March 1863, *ORN*, I, 8, p. 620.
80 E. Hooker to B. F. Sands, 29 December 1862, *ORN*, I, 8, p. 336.

focus of their activities to the two main inlets of the Cape Fear and almost entirely abandoned the use of sailing vessels. In March 1863, Commander A. L. Case pointed out that:

> None but quick vessels in good order can be of any service off New Inlet. The class of vessels now violating the blockade is far different from those attempting it a year ago, and the batteries are so numerous that we can do but little, if anything, after they are once by us.[81]

To intercept that new class of swift steamers, a different strategy was required. The Wilmington Squadron was divided into two separate stations; one to blockade the traditional approach at Smithville and a second to guard New Inlet. At night, the preferred time for blockade runners to make their critical run across the bar, picket boats were stationed in the channel to watch for steamers. Their objective was to give warning to the gunboats that a vessel was attempting to escape or to enter the Cape Fear.[82]

That duty was frequently dangerous. The bar was a dynamic environment under the guns of Confederate fortifications. Early on the morning of 14 February, Acting Master William Earle was in command of the second cutter of the USS *Dacotah* anchored in the channel southwest of Fort Caswell.[83] About 4 a.m., Earle noticed a "long, low steamer, with two masts and two smokestacks" approaching from the west. Earle was afraid of being run down as the steamer was traveling so fast that the hull was visible for only two minutes.[84] "With much chagrin" Captain Sands reported that he could not see how to prevent the success of blockade runners without "more vessels to string along the beach in sight of each other, and a line, or even one steamer, outside, to intercept before they make the land...."[85]

On 26 March, Captain Case suggested that:

> Vessels farther from the inlet than we usually are will have the best chance. Where we lay, and where some vessels always should be, it is a dash with them, if seen, and they are soon under

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81 A. L. Case to S. P. Lee, 12 March 1863, *ORN*, I, 8, p. 50.
82 B. F. Sands to S. P. Lee, 14 February 1863, *ORN*, I, 8, pp. 527-528.
83 William Earle to B. F. Sands , 14 February 1863, *ORN*, I, 8, p. 528.
84 *Ibid.*
85 B. F. Sands to S. P. Lee, 14 February 1863, *ORN*, I, 8, p. 528.

> the batteries; if not seen, the result is of course the same. When going out, of a dark night, it is pretty much the same thing; the ground is clear for their light draft, and they have pilots who know every inch of it. Such vessels as this are visible long before we can see them, and they come, after seeing us, with a full head of steam and are by us and away in a jiffy[86]

Sands had suggested that an outer line of vessels be formed beyond the stations of the force already deployed off New Inlet to intercept vessels approaching the Cape Fear.[87] Commander Case agreed that their "chief hope of success in preventing the inward violation of the blockade will be in finding the vessels farther away" and also recommended an "offshore as well as an inshore lookout vessel."[88] On 26 February, Captain Sands reported another violation of the blockade and again suggested an "outer line of cruising vessels" to capture vessels driven off or identified in escaping by picket boats on the bar.[89] Sands also recommended the use of a "low-pressure tug for each side of the reef, with a rifle howitzer to sweep the coast at night above New Inlet and below Western Inlet."[90] Commander Case reiterated the usefulness of the tugs especially if they were "fast, with engine and boiler in first-rate order." Case was not sure the inshore blockade could be "effective without....tugs or some small and very fast steamers, such as can move about at night without being seen and signaled, as all the large vessels are now."[91] The new strategy proved to be highly effective and significantly increased the risk to blockade runners.

The tug *Violet* was assigned to the Wilmington Squadron on 27 March 1863 and four days later S. P. Lee informed Captain A. L. Case that the department was "preparing three light, swift steamers for duty off Wilmington, which, doubtless, when completed and sent, will materially strengthen that blockade."[92] With shallow draft vessels and tugs a slightly different blockade strategy could be adopted off Wilmington. During the night the *Violet* was assigned a station close to the bar. Three other vessels were assigned positions

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86 A. L. Case to S. P. Lee, 26 March 1863, *ORN*, I, 8, pp. 630-631.
87 B. F. Sands to S. P. Lee, 10 February 1863, *ORN*, I, 8, p. 519.
88 A. L. Case to S. P. Lee, 21 February 1863, *ORN*, I, 8, pp. 546-547.
89 B. F. Sands to S. P. Lee, 26 February 1863, *ORN*, I, 8, p. 572 and R. Hustace to D. L. Braine, 25 February 1863, *ORN*, I, 8, p. 573.
90 B. F. Sands to S. P. Lee, 26 February 1863, *ORN*, I, 8, p. 572.
91 A. L. Case to S. P. Lee, 10 March 1863, *ORN*, I, 8, pp. 595-596.
92 S. P. Lee to A. L. Case , 31 March 1863, *ORN*, I, 8, p. 642.

that formed a crescent further off shore. The northern and southern vessels were to move in near the shore under cover of darkness and cruise slowly up and down the coastline as close as conditions permitted.[93] To help the vessels navigate safely close to shore, a light was placed on the USS *Iroquis*' day station buoy.[94] With an outer line of vessels cruising from the outer shoal off New Inlet and Rich Inlet, Commander Armstrong of the USS *State of Georgia* felt that they "might get them in a net and hope to put a stop to this nefarious neutral traffic...."[95] Rear-Admiral Lee suggested that Captain Case assign the USS *Niphon* to cruise on an arc about 30 miles out from [Rich Inlet] to pick up some of the blockade breakers.[96]

In spite of efforts to tighten the Cape Fear blockade, illegal steamer traffic at Wilmington increased. It was not until 11 June 1863 that the Wilmington Squadron was able to capture one of the steamers operating with regularity through the blockade. That vessel was the *Calypso*. After sighting the steamer from her day anchorage 6 miles off the Western Bar, the USS *Florida* was able to chase down the *Calypso* by "crowding canvas....and by burning slush in the furnaces."[97]

Capture of the *Calypso* was eclipsed by the appearance of one of the ironclads built at Wilmington. On the morning of 30 June, the armored vessel was identified lying off Smithville in the company of a powerful paddle-wheel steamer. Clearly the vessel had "steam up, and [was] apparently ready to come out the first favorable opportunity."[98] Captain Charles Boggs of the USS *Sacramento* wrote S. P. Lee to request assistance and warn that:

> The vessels off the Western bar are all cripples in their engines, and should the raid come from that quarter before reinforcements arrive, they will be fortunate if they escape capture, as to prevent such vessels from coming out is impossible on either side with such vessels as compose the blockading squadron.[99]

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93 A. L. Case to S. P. Lee, 13 May 1863, *ORN*, I, 9, p. 17.
94 A. L. Case to S. P. Lee, 13 July 1863, *ORN*, I, 9, p. 124.
95 J. F. Armstrong to A. L. Case, 17 May 1863, *ORN*, I, 9, pp. 27-28.
96 S. P. Lee to A. L. Case, 26 May 1863, *ORN*, I, 9, p. 44.
97 J. P. Bankhead to Gideon Welles, 14 June 1863, *ORN*, I, 9, p. 73.
98 C. S. Boggs to S. P. Lee, 3 July 1863, *ORN*, I, 9, pp. 101-102.
99 *Ibid.*

The appearance of a Confederate ironclad at Smithville caused a furor within the Wilmington Squadron. Acting Paymaster William F. Keeler of the USS *Florida* described the situation in a letter to his wife Anna. On 13 July 1863, Keeler wrote:

> A terrible disease is prevailing in the fleet here--commanding officers seem to be the most severely attacked with it though no one as yet has been lost. It is termed "ram fever" & is supposed to be brought on by the occasional sights at a rebel ironclad passing up & down the river between Fort Caswell & Wilmington.[100]

Although the CSS *North Carolina* would never conduct an offensive operation, the presence of the ironclad off Battery Island psychologically strengthened Confederate defenses.

Perhaps as a consequence of the arrival of the CSS *North Carolina* and the increased level of alert associated with the consternation it caused, the Wilmington Squadron captured or destroyed nine steamers between 12 July and 21 October 1863. The first of those vessels was the twin screw steamer *Kate*, the second vessel to bear that name. The *Kate* was headed into Old Inlet and Wilmington after being chased away from Charleston. After being discovered by the USS *Penobscot*, the blockade runner was run aground. A crew from the USS *Penobscot* destroyed the vessel's machinery and set the ship afire in spite of fire from a Confederate battery.[101] Shortly after dawn on 1 August 1863, Captain James Trathen of the USS *Mount Vernon* discovered that Confederates had refloated the *Kate* and were towing the steamer toward New Inlet. In spite of accurate fire from Armstrong and Whitworth guns, the USS *Mount Vernon* was able to drive the salvage crew away from the *Kate* and tow the vessel out of range. The USS *Iroquois* towed the wrecked steamer to Beaufort.[102]

The strategy of keeping vessels in close to the bar during dark nights paid off when the paddle steamer *Merrimac* was sighted running out of New Inlet about 2 a.m. on 24 July 1863. Although the *Merrimac* and another steamer escaped during the night, the USS *Iroquois* steamed north up the coast and at

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100 William F. Keeler to Anna Keeler, 13 July 1863, Robert Daly, ed., *Aboard the U.S.S. Florida 1863-1865.*, Naval Institute Press, Annapolis, 1968, p. 66.

101 A. L. Case to S. P. Lee, 13 July 1863, *ORN*, I, 9, pp. 120-121; S. P. Lee to Gideon Welles, 28 July 1863, *ORN*, I, 9, p. 121 and J. E. De Haven to A. L. Case, 12 July 1863, *ORN*, I, 9, p. 122.

102 S. P. Lee to Gideon Welles, 6 August 1863, *ORN*, I, 9, p. 142; A. L. Case to S. P. Lee, 2 August 1863, *ORN*, I, 9, pp. 142-143; and James Trathen to S. P. Lee, 3 August 1863, *ORN*, I, 9, pp. 143-144.

daylight rediscovered the *Merrimac*. With the assistance of another steamer the blockade runner was captured after a chase of more than three hours.[103] Because of the speed and condition of the *Merrimac*, Rear-Admiral S. P. Lee requested that the vessel be obtained by the Navy, fitted out for service on the blockade and sent back to the Wilmington Squadron.[104]

In early August, Acting Rear-Admiral Lee reported the escape of a screw steamer from New Inlet and took the opportunity to point out to Welles that the USS *Mount Vernon* was unable to catch the blockade breaker "for want of speed." That vessel had been on the blockade for ten months and was in bad need of an overhaul. Only the USS *Minnesota* was on station at the time as the USS *Iroquois* was in Beaufort with the *Kate* and coaling and the USS *James Adger* was occupied in positioning the Frying Pan Lightship. Lee also pointed out that the three vessels on the south side of Cape Fear were also in a state of disrepair. Both the USS *Chocura* and USS *Victoria* were too slow to chase effectively because of badly needed repairs and the USS *Sacramento*'s valves were cut so badly that "she must probably be very soon sent north for new ones...."[105] Lee reiterated the complications created by geography and the threat of Confederate ironclads and suggested that from fifteen to eighteen steamers were required to effectively blockade "the most difficult port to close on the coast of the United States...." Two ironclads were necessary at Wilmington, one to guard each entrance to the Cape Fear. In the event that ironclads were not available, Lee wanted warships carrying "effective broadside batteries" and two similar vessels to keep their stations when supplies and repairs were necessary.[106]

The dramatic sinking of the USS *Hatteras* by the commerce raider CSS *Alabama* off Galveston had almost as profound an effect on the vessels on the Wilmington Station as did the appearance of Confederate ironclads in the lower Cape Fear River. On 11 January 1863, the CSS *Alabama*, under the command of Captain Raphael Semmes, drew the steamer USS *Hatteras* away

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103 A. L. Case to S. P. Lee, 24 July 1863, *ORN*, I, 9, pp. 131-132, A. L. Case to S. P. Lee, 25 July 1863, *ORN*, I, 9, pp. 132-133 and A. L. Case to S. P. Lee, 27 July 1863, *ORN*, I, 9, p. 133.
104 S. P. Lee to Gideon Welles, 31 July 1863, *ORN*, I, 9, p. 141.
105 S. P. Lee to Gideon Welles, 7 August 1863, *ORN*, I, 9, pp. 149-150.
106 *Ibid.*

from a fleet dispatched to recapture Galveston. In a brief battle the CSS *Alabama* sank the USS *Hatteras* and escaped.[107] As early as February 1863, Captain B. F. Sands warned S. P. Lee that:

> I can not send one vessel alone to chase, if she is not able to cope with any rebel afloat, but must send an additional one to look out for her, for any bold buccaneer may draw her away from the squadron and destroy her, as was done with the *Hatteras*....Many of our vessels are not a bit better than was the *Hatteras*, and could not be expected to make a better fight with such a foe, and would only be doomed to go down as she did, with her flag flying.[108]

That anxiety persisted and in some cases undermined the willingness of captains to put their vessels at risk in chasing unidentified steamers. On 20 August 1863, the USS *Florida*, USS *Montgomery* and USS *Victoria* chased two unidentified steamers off the Western Bar. Both vessels displayed lights, refused to answer the designated Coston signal and did not attempt to escape as most blockade runners. Lieutenant MacDiarmid of the USS *Victoria* thought one of the vessels was "a bark-rigged armed steamer, and endeavored to entice him from the squadron, as her movements were certainly very strange, going ahead slowly when he did, stopping when he did, showing a light and gradually working to the southward and westward....[109] MacDiarmid "deemed it prudent" to return to the fleet rather than pursue the strange steamer.[110]

In spite of the condition of the vessels blockading the Cape Fear, the appearance of ironclads and the threat of the CSS *Alabama* and other Confederate war steamers, an unprecedented number of blockade running steamers were captured or destroyed during the fall of 1863. The first of those was the screw steamer *Hebe*. That vessel was run ashore north of Fort Fisher. A boarding party from the USS *Niphon* attempted to destroy the vessel and was captured after their boats capsized and they made their way to shore.

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107 H. C. Blake to Gideon Welles, 21 January 1863, *ORN*, I, 2, p. 721 and Raphael Semmes, *Memoirs of a Service Afloat During the War Between the States*, Kelly, Piet & Company, Baltimore, 1869, p. 542.

108 B. F. Sands to S. P. Lee, 10 February 1863, *ORN*, I, 8, pp. 518-519.

109 S. D. Greene to C. S. Boggs, 20 August 1863, *ORN*, I, 9, pp. 156-157.

110 John MacDiarmid to C. S. Boggs, 20 August 1863, *ORN*, I, 9, pp. 157-158.

Union vessels and Confederate artillery fought over the wreck until two valuable Whitworth field pieces were captured by a landing party from the USS *Minnesota*.[111]

After the *Hebe* skirmish several blockade runners were driven ashore under the guns of Fort Fisher.[112] There grounded vessels were relatively safe from the Union fleet and Confederates could refloat them unless environmental conditions prevented that operation. The steamer *Arabian* proved to be one of two blockade runners discovered ashore by the USS *Niphon* on the morning of 8 September.[113] That vessel was apparently chased ashore by the USS *Nansemond* and was completely destroyed by the sea before a salvage operation could be organized.[114] On 22 September, the steamer *Juno* was captured by the USS *Connecticut* approximately 20 miles south of Cape Lookout. The USS *Connecticut* had been ordered to cruise offshore after "the moon went down" as several blockade runners in the Cape Fear were expected to attempt to escape. The morning after the *Juno* was captured, the Confederate steamer *Phantom* was forced ashore near Topsail Inlet by the USS *Connecticut*. Like *Juno*, the *Phantom* was discovered about 55 miles northeast of New Inlet. In a report to S. P. Lee, Commander John Almy of the *Connecticut* pointed out that, "both of these steamers were fallen in with on an east by north line from New Inlet." The captures illustrated "the importance of having an offshore cruiser of two from among our fast steamers."[115] By mid-October Captain Sands reported that he had directed vessels coaling at Beaufort to:

> leave....in the afternoon tide, when it is possible to steer south for 50 or 60 miles, or until daylight, to be at that time about where blockade runners would be escaping out of New Inlet. This will give me an outsider nearly every day, and does not take any more time away from the immediate blockade of the coast.[116]

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111 S. P. Lee to Gideon Welles, 24 August 1863, *ORN*, I, 9, pp. 165-166, J. B. Breck to Captain A. L. Case, 18 August 1863, *ORN*, I, 9, pp. 165-166, J. B. Breck to Captain A. L. Case, 18 August 1863, *ORN*, I, 9, pp. 166-167, Pierce Crosby to S. P. Lee, 8 September 1863, *ORN*, I, 9, pp. 170-171 and W. H. C. Whiting to Secretary James a. Seddon, 24 August 1863, *ORN*, I, 9, pp. 173-174.

112 S. P. Lee to Gideon Welles, 11 September 1863, *ORN*, I, 9, pp. 193-194.

113 *Ibid*.

114 S. P. Lee to Gideon Welles, 29 September 1863, *ORN*, I, 9, p. 221.

115 J. Almy to S. P. Lee , 23 September 1863, *ORN*, I, 9, pp. 216-217.

116 B. F. Sands to S. P. Lee , 23 September 1863, *ORN*, I, 9, pp. 235-236.

On 4 November, the inbound steamer *Margaret and Jessie* was discovered running south along the beach approximately six miles above Fort Fisher by the USS *Niphon*. USS *Niphon* chased the *Margaret and Jessie* toward New Inlet until the blockade runner sighted the *Howquah* guarding the bar. A shot from the USS *Howquah* forced the *Margaret and Jessie* to steam off shore. After an all night chase by USS *Howquah*, the USS *Nansemond* and USS *Keystone State* took up pursuit and drove the blockade runner into range of an army transport, the *Fulton*, that took *Margaret and Jessie* in tow after a brief disagreement about authority over the prize.[117] No doubt capture of the *Margaret and Jessie* was in part due to Captain D. B. Ridgely's decision to order vessels to cruise offshore. Ridgley notified Lee that:

> I have ordered the three fastest vessels offshore, viz: the *Nansemond*, the *Keystone State*, and the *Florida*; the *Nansemond* to cruise from Cape Lookout 60 miles south, and return to the same line north; the *Keystone State* to take a position 70 miles E. S. E. from New inlet and cruise 30 miles S. W. and 30 miles N. E. from the position of E. S> E. of New Inlet; the *Florida* to take a position 40 miles S. by E. from the light-boat off Frying Pan Shoals and cruise 30 miles E. N. E. from the position given her and 30 miles W. S. W.[118]

Four days later the USS *James Adger* discovered the Confederate steamer *Cornubia* about three miles south of Masonboro Inlet. After a short chase ended with the appearance of the USS *Niphon*, the steamer was run ashore and abandoned. As the tide was rising, the *James Adger* was able to pull the vessel free.[119] Two days later and enroute to Beaufort for coal the USS *James Adger* happened upon the steamer *Robert E. Lee* approximately 25 miles southwest of the Beaufort Bar. After a surprisingly short chase the *Robert E. Lee* hove to and a boarding party from the USS *James Adger* took possession.[120]

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117 D. B. Ridgely to S. P. Lee , 5 November 1863, *ORN*, I, 9, pp. 262-263 and S. P. Lee to Gideon Welles, 12 November 1863, *ORN*, I, 9, p. 264.

118 D. B. Ridgely to S. P. Lee, 5 November 1863, *ORN*, I, 9, pp. 262-263.

119 T. H. Patterson to S. P. Lee, 8 November 1863, *ORN*, I, 9, pp. 273-274 and J. B. Breck to Acting Rear Admiral S. P. Lee, 8 November 1863, *ORN*, I, 9, pp. 274-275.

120 T. H. Patterson to Gideon Welles, 9 November 1863, *ORN*, I, 9, pp. 289-290 and S. P. Lee to Gideon Welles, 12 November 1863, *ORN*, I, 9, pp. 287-288.

The USS *Niphon* made one of the most dramatic captures on 9 November 1863. Returning from one chase the USS *Niphon* sighted a steamer running south along the surf near Masonboro Inlet. When it was apparent that escape was impossible, the unidentified steamer rammed the USS *Niphon* carrying away the bowsprit, part of the stem and the starboard boats. After firing on the steamer at point blank range the vessel was carried by boarding. The USS *Niphon*'s prize proved to be the *Ella and Annie*.[121] On the evening of 10 November, the USS *Howquah* also made a quick and important capture. While cruising near the shore 13 miles north of Fort Fisher, the USS *Howquah* discovered a steamer heading south along the shore. After a shot "glanced against the gallows frame of her engine" the vessel hove to and was boarded. That steamer proved to be the *Ella* running in from Bermuda.[122]

Much to the chagrin of the North Atlantic Blockade Squadron, the army transport steamer *Fulton*, enroute from Hilton Head, South Carolina to New York, took possession of the blockade runner *Banshee* south of Cape Lookout on 21 November 1863. The *Fulton* sighted the *Banshee* early in the morning and gave chase. Shortly after giving chase to the blockade runner the crew of the *Fulton* noticed another steamer following the *Banshee*. As the *Fulton* was faster that vessel took possession of the prize when shells from both the *Fulton* and the USS *Grand Gulf* forced the blockade runner to surrender. As had been the case with the *Margaret and Jessie*, the *Fulton*'s officers and crew refused to give up their prize to the USS *Grand Gulf*. After a brief confrontation the army transport steamed northeast toward New York with the *Banshee* in tow.[123]

On the south side of Smith Island success and the blockade runners were more elusive. Only one vessel was destroyed during the period. Off Lockwoods Folly Inlet the day after the *Phantom* was destroyed, the crew of the USS *Maratanza* discovered the remains of a steamer. The vessel had been run ashore during the night and the cargo removed. Surprisingly, the steamer had been put to the torch without attracting the attention of any of the vessels on

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121 J. B. Breck to Gideon Welles, 9 November 1863, *ORN*, I, 9, p. 292, S. P. Lee to Gideon Welles, 12 November 1863, *ORN*, I, 9, p. 291 and D. B. Rigley to S. P. Lee, 10 November 1863, *ORN*, I, 9, pp. 294-295.

122 S. P. Lee to Gideon Welles, 19 November 1863, *ORN*, I, 9, p. 298 and John MacDiarmid to Gideon Welles, 13 November 1863, *ORN*, I, 9, p. 298.

123 S. P. Lee to Gideon Welles, 24 November1863, *ORN*, I, 9, pp. 318-319; G. M. Ransom to S. P. Lee, 21 November 1863, *ORN*, I, 9, pp. 319-320; C. H. Frisbie to G. M. Ransom, 21 November 1863, *ORN*, I, 9, pp. 320-321 and J. E. Bailey to General E. D. Townsend, 24 November 1863, *ORN*, I, 9, pp. 321-322.

the blockade. That ship ultimately proved to be the *Elizabeth*, inbound with a cargo of iron and saltpeter.[124] Although vessels continued to use the Western Inlet to the Cape Fear, Commander Harrell reported his "utter inability with my present force to prevent it."[125] Harrell complained of the poor condition of the vessels under his command and requested three more fast vessels to help make the blockade effective.[126] Commander Pierce Crosby of the USS *Florida* reported being quickly out distanced by a steamer south of Cape Fear on 30 November. According to his calculations "the USS *Florida*, with a full head of steam, averaging 22 and 23 pounds, with all sail and strong fair wind, made 10 knots."[127]

Arrival and assignment of the converted blockade runner USS *Calypso* provided at least one fast vessel for the Western Bar.[128] Ironically, the first prize of the USS *Calypso* was not one of the fast steamers but the schooner *Herald* from Nassau.[129] At dawn on 6 December another blockade runner fell into the hands of the Western Bar Squadron. The iron screw steamer *Ceres* was discovered aground on the south side of Smith Island by the USS *Aries* and tug *Violet*. Crews from both Union vessels attempted to put out the fires set by personnel of the *Ceres* but were forced to abandon the ship when batteries at Fort Caswell and Oak Island began to shell the wreck. Early the next day the *Ceres* was discovered to have floated off with the tide. After drifting out of range of Confederate batteries, the vessel was taken in tow by the USS *Maratanza*.[130] Although the vessel and cargo had been badly damaged by fire, letters captured by the boarding party provided insight into Confederate blockade running.

Before the end of December two additional steamers were destroyed. On the night of 11 December the USS *Howquah* found the steamer *General Beaureguard* heading down the beach toward New Inlet. *Howquah* succeeded in forcing the *General Beaureguard* ashore and reported that the blockade

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124 A. D. Harrell to B. F. Sands, 5 October 1863, *ORN*, I, 9, pp. 229.
125 *Ibid.*
126 *Ibid.*
127 Pierce Crosby to S. P. Lee, 9 December 1863, *ORN*, I, 9, pp. 332-333.
128 B. F. Sands to S. P. Lee, 6 October 1863, *ORN*, I, 9, p. 228.
129 S. P. Lee to Gideon Welles, 7 November 1863, *ORN*, I, 9, p. 269.
130 T. Stothard to S. P. Lee, 7 December 1863, *ORN*, I, 9, pp. 336-337; S. P. Lee to Gideon Welles, 7 November 1863, *ORN*, I, 9, pp. 337-338 and J. A. Brannan and G. M. Smith to E. F. Devensand, 6 December 1863, *ORN*, I, 9, p. 336.

runner became a total wreck as a consequence of the heavy sea that was running.[131] On the south side of Frying Pan the "notorious" steamer *Herald* was run on the shoal during the night on 19 December 1863. After being chased by the USS *Connecticut*, the *Herald* was discovered hard aground on the west side of the shoal on the morning of 20 December by the USS *Governor Buckingham*. In spite of five days of extensive efforts to pull the *Herald* into deeper water the hull broke across the bottom and the salvage effort was abandoned. Only a portion of the cargo was recovered.[132]

Although the vessels blockading the Western Bar had not achieved the success registered off New Inlet, effective techniques for capturing blockade breakers had been developed. By the end of 1863, S. P. Lee issued detailed instructions to the commanding officers of all vessels on the Wilmington Station. Lee's 16 December 1863 instructions reflected experience gained during two and a half frustrating years of efforts to close the port of Wilmington.

Off each inlet to the Cape Fear, Lee designated three primary day stations. North of Frying Pan, stations were established off New Inlet, off Masonboro Inlet and at the eastern end of Smith Island. On the west side of Frying Pan stations were located off the Western Bar, off Lockwoods Folly and off the southeast end of Smith Island. Between those primary stations, intermediate stations were to be established in accordance with the number of steam vessels available. During the day, vessels anchored at those stations were ordered to maintain watches but, the officers and crew on duty at night were encouraged to sleep for eight to ten hours after dawn. Unless absolutely necessary, steamers were not to move about during the day to conserve their coal. One-half hour before sunset vessels were to raise their anchors and get underway for their night stations in close to shore.[133]

Lee's strategy was based on two lines of vessels operating off each Cape Fear River inlet. On dark nights and before and after the moon had set, a small fast steamer was assigned to guard the bar. That vessel was to notify the fleet of an attempted escape using Coston's signals. Lee was careful to point out that the fleet should not be notified until the blockade runner's retreat could be "cut off by getting between him and the bar or coast." Too many blockade runners

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131 D. B. Ridgely to S. P. Lee, 16 December 1863, *ORN*, I, 9, pp. 354-355.
132 J. J. Almy to S. P. Lee, 21 December 1863, *ORN*, I, 9, pp. 366-367.
133 S. P. Lee to Commanding Officers of Blockading Vessels off Wilmington, 16 December 1863, *ORN*, I, 9, pp. 355-358.

had been warned by premature signals and been able to return to the protection of Confederate batteries to await another opportunity. Because the bar was a dangerous place at night, Lee cautioned that "the distance to be kept from the bar, the batteries, and the beach, etc., must be regulated by the state of the weather and light, and the zeal and good sense of the commanding officer."[134] To ensure that blockade runners did not escape to sea once discovered, a fast steamer was assigned to cruise five miles offshore of the senior officer's night station. Off New Inlet that vessel was to cruise slowly back and forth along a north to south course and off the Western bar that steamer was to cruise slowly back and forth along an east to west track.[135] Swift steamers on the outer line were to take over a chase from "dull" vessels unable to make sufficient speed to run down blockade runners. On special instruction from Lee, some swift steamers would be ordered to blockade off Cape Fear and Cape Lookout Light in order to intercept blockade runners that had escaped the inner line of the blockade or vessels like the *Cornubia* and *Robert E. Lee* that were laying to in order to time their final run through the blockade.[136]

To the north of New Inlet near Masonboro and to the south of the Western Bar off Lockwoods Folly, the senior officer was to station his fastest vessels. By December 1863, it was readily apparent the blockade runners approached the beach at those points before making a final run along the coastline to the protection of Fort Fisher or Fort Caswell. Where possible those locations should be occupied in force to permit more than one steamer to be chased without leaving the coastline unguarded for others. Unless prevented by thick weather, those vessels were to be underway all night with leadsmen on each side of the ship sounding constantly to prevent a reoccurrence of the loss of the USS *Columbia*. In thick weather vessels were not to be "huddled together" and every effort was to be made to avoid collisions. Collisions were a major consideration as Lee ordered that "each commanding officer should make sure that no lights, other than signals, should be seen from his vessel, and that the lights on board are so covered, placed, and used that they can not

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134 S. P. Lee to Commanding Officers of Blockading Vessels off Wilmington, 16 December 1863, *ORN*, I, 9, pp. 355-356.
135 *Ibid.*
136 S. P. Lee to Commanding Officers of Blockading Vessels off Wilmington, 16 December 1863, *ORN*, I, 9, p. 358.

be seen through windows or portholes, in opening doors, mustering watch, etc. The senior had the discretion to position a steamer with a light that could be used by vessels cruising at night for taking bearings.[137]

Particular care was to be taken in coaling vessels on the blockade. If at all possible that was to be accomplished during the period when the moon was filling and "light nights" made blockade running less likely. The senior officer at Wilmington was authorized to schedule coaling, but was instructed to see that there should only be two, or at the outside three, vessels at Beaufort for that purpose at a time. The commanding officer of each steamer going to Beaufort to coal was to take the most direct route and not delay the trip by cruising for blockade runners. However, in the event that a blockade runner was discovered enroute or returning from Beaufort, latitude was provided to give chase if there were fair prospects of success.[138]

To increase both safety and efficiency Lee ordered that each vessel be properly supplied and equipped. Each ship's boats were to be suitable for beaching and boarding and all were to be equipped with a good kedge and a strong cable. Each was to be manned by good oarsmen and a skillful officer. Each blockader was to carry a spare anchor, two anchor stocks and "a large, strong hawser, capable of towing or hauling off stranded vessels." Each was to be supplied with double the usual supply of leads and lead lines. The officer of the deck was to be issued a deck board showing the time of high and low water, moon rise and set and sun rise and set. A varnished sketch of the navigation chart showing the shore line; the 1, 2 and 3 fathom lines, significant soundings, the positions of ranges and the anchorages was also to be kept on deck along with a compass.[139] Each officer was also supplied:

> ....general squadron and blockading instructions, the general orders and circulars of the Department and of this squadron, statement of periodical returns required from commanding officers, and extracts from consular dispatches lately received by me relative to the character and movement of vessels in the interests of the rebels.[140]

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137 S. P. Lee to Commanding Officers of Blockading Vessels off Wilmington, 16 December 1863, *ORN*, I, 9, pp. 356-358.
138 *Ibid.*
139 *Ibid.*
140 S. P. Lee to J. M. Frailey, 16 December 1863, *ORN*, I, 9, p. 358.

The strategies developed during 1862 and 1863, and the buildup in vessel strength in 1864 produced more encouraging results. In addition, the closing of Savannah and more particularly the intense blockade at Charleston, South Carolina shifted the focus of blockade running to Wilmington in 1864. In addition several captured blockade runners were assigned to the Wilmington Squadron in 1864, thus increasing the speed of blockading vessels.

While blockade running seemed to shift to New Inlet during the fall and winter of 1863, activity on the Cape Fear focused on the west side of Frying Pan Shoals in January 1864. On 3 January 1864, the USS *Fahkee* discovered the *Bendigo* aground and in flames.[141] A survey of the vessel revealed that the cargo had been entirely removed. Apparently the captain of the *Bendigo* mistook the remains of the *Elizabeth* as a blockader and ran into shoal water attempting to pass inside that wreck.[142] In attempting to get the *Bendigo* off, the USS *Iron Age* got aground and ultimately had to be destroyed.[143] The USS *Montgomery* discovered another blockade runner, the *Dare*, to the southwest of Lockwoods Folly Inlet on the morning of 7 January. The USS *Mongtomery* gave chase and was joined by the USS *Aries*, a blockade runner converted for blockade duty. After a chase of more than six hours the *Dare* was run aground on the beach northeast of Georgetown, South Carolina and destroyed by fire.[144]

At daylight on the morning of 11 January two other steamers were destroyed on the beach west of Lockwoods Folly Inlet. The first was the *Ranger* chased ashore by the USS *Daylight*, USS *Governor Buckingham* and USS *Aries*.[145] While crews from those vessels labored to destroy the *Ranger* smoke was observed to the west in the vicinity of Shallotte Inlet. The USS *Aries* was dispatched to give chase but returned to report a double-screw steamer ashore and on fire. That vessel proved to be the *Vesta*, unsuccessfully chased during the night by the USS *Quaker City*, USS *Tuscarora* and USS *Keystone State*.[146]

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141 S. P. Lee to Gideon Welles, 4 January 1863, *ORN*, I, 9, pp. 385-386.
142 *Ibid.*
143 E. E. Stone to Gideon Welles, 14 January 1863, *ORN*, I, 9, pp. 396-398; S. P. Lee to Gideon Welles, 29 January 1863, *ORN*, I, 9, pp. 398-400. and F. S. Wells to S. P. Lee, 13 January 1863, *ORN*, I, 9, pp. 400-401.
144 E. H. Faucon to S. P. Lee, 8 January 1863, *ORN*, I, 9, pp. 388-389, Robert Wiley to E. H. Faucon, 8 January 1863, *ORN*, I, 9, p. 389 and E. F. Devens to S. P. Lee, 9 January 1863, *ORN*, I, 9, p. 391.
145 S. P. Lee to Gideon Welles , 11 January 1863, *ORN*, I, 9, p. 402 and George W. Gift to Catesby ap R. Jones, 27 January 1863, *ORN*, I, 9, p. 405.
146 S. P. Lee to Gideon Welles, 11 January 1863, *ORN*, I, 9, p. 402 and E. F. Devens to S. P. Lee, 11 January 1863, *ORN*, I, 9, pp. 403-404.

During the dark of the moon in February, seven vessels were captured or destroyed off Wilmington. With the exception of the small steamer *Spunkie*, which was discovered ashore on the beach west of Fort Caswell and the steamer *Pet* chased down by the USS *Montgomery* off Lockwoods Folly, all of the blockade runners were intercepted on the north side of Cape Fear.[147] The first was the *Wild Dayrell* which was found ashore and empty in Stump Inlet on 2 February by the USS *Sassacus*. After efforts to pull the *Wild Dayrell* off proved unsuccessful, the vessel was set on fire and shelled by both the USS *Sassacus* and USS *Florida*.[148] After assisting in the destruction of the *Wild Dayrell*, the USS *Sassacus* returned to her station along the "Bermuda line" about daylight on 4 February. At 7 a.m. lookouts discovered a steamer to the north and the *Sassacus* gave chase. Because of her speed, almost 13 knots, the USS *Sassacus* was able to overtake the steamer. Rather than be captured the captain of the blockade runner, the *Nutfield*, headed the vessel into New River Inlet where she was run ashore and abandoned. Being unable to refloat the *Nutfield*, the boarding party from the *Sassacus* recovered as much of the cargo as practical and put the ship to the torch. With the assistance of the USS *Florida*, the USS *Sassacus* shelled the wreck to destroy both the hull and machinery.[149]

Three days later on the morning of 6 February, the USS *Fort Jackson* discovered the twin-screw steamer *Dee* aground and on fire one mile south of Masonboro Inlet. Being unable to get the *Dee* off, the USS *Fort Jackson* shelled her hull and machinery. A boarding party from the USS *Niphon* threw 170 pigs of lead overboard on 7 February and reported that the vessel was a complete wreck.[150] Cruising the same area at dawn on 10 February, the USS *Florida* found a paddle-wheel steamer, the *Fanny and Jenny*, heading southward along the beach and steamed to cut off the vessel. While underway the crew of the USS *Florida* noticed a screw steamer, the *Emily*, aground off the beach to the north of the chase. The captain of the paddle-wheel ran the vessel ashore north of Masonboro Inlet and was killed, along with the paymaster,

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147 J. M. Frailey to S. P. Lee, 17 February 1864, *ORN*, I, 9, p. 473 and E. H. Faucon to S. P. Lee, 16 February 1864, *ORN*, I, 9, pp. 486-487.

148 Pierce Crosby to S. P. Lee, 3 February, *ORN*, I, 9, pp. 437-438 and F. A. Roe to S. P. Lee, 3 February 1864, *ORN*, I, 9, pp. 438-439.

149 Pierce Crosby to S. P. Lee, 5 February, *ORN*, I, 9, pp. 460-461 and F. A. Roe to S. P. Lee, 4 February 1864, *ORN*, I, 9, pp. 459-460.

150 B. F. Sands to S. P. Lee, 7 February 1864, *ORN*, I, 9, p. 467; W. F. Spicer to B. F. Snads, 6 February 1864, *ORN*, I, 9, pp. 467-468 and B. F. Sands to S. P. Lee, 8 February 1864, *ORN*, I, 9, pp. 467-468.

attempting to escape to the beach. The crew was captured and both the *Fanny and Jenny* and *Emily* were burned because the fire from Confederate sharpshooters and Whitworth rifled guns on the beach prevented attempts to get the vessels afloat.[151]

Responding to a congratulatory letter from Gustavus Fox concerning the number of blockade runners captured or destroyed in February, Acting Rear-Admiral Lee reiterated the need for additional fast vessels and the necessity for maintaining cruisers offshore. He wrote:

> A modern blockading squadron has much more to do than merely threatening an entrance. It should intercept runners where daylight shows them after a long night's run from either end of their lines. In no other way can a wooden blockade be made effective. Out runners can not be stopped just off an entrance which they can pass any dark night.[152]

Admiral Lee's point was well made in March and again in May 1864. With twenty-one steamers assigned to the Cape Fear, four could be assigned to cruise offshore along the preferred routes to Bermuda and Nassau.[153] In March the *Scotia* was captured 65 miles south-southeast of Cape Fear by the USS *Connecticut* and the *Don* was chased down off Beaufort by the USS *Pequot.*[154] The USS *Grand Gulf* cruising south of Cape Fear captured the steamer *Mary Ann.*[155] The success of Lee's offshore cruisers was offset somewhat by the loss of the USS *Peterhoff* off the east side of Smith Island on 6 March 1864. The USS *Peterhoff* had only been on station off New Inlet for a few weeks when the USS *Monticello* rammed and sank the converted blockade runner. Although no one was lost the vessel was a total loss.[156]

The blockade failed to produce the kind of results in April that it had in February and March 1864. One indication of the reason was provided by the escaped mulatto servant of Colonel Lamb. The man informed Captain B. F.

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151 Pierce Crosby to S. P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474 and Pierce Crosby to S. P. Lee, 11 February 1864, *ORN*, I, 9, pp. 474-476.

152 S. P. Lee to G. V. Fox, 20 February 1864, *ORN*, I, 9, pp. 495-497.

153 S. P. Lee to Gideon Welles, 23 February 1864, *ORN*, I, 9, pp. 499-500.

154 J. J. Almy to S. P. Lee, 1 and 4 March 1864, *ORN*, I, 9, pp. 519-521 and S. P. Quackenbush to S. P. Lee, 4 March 1864, *ORN*, I, 9, pp. 524-525.

155 S. P. Quackenbush to S. P. Lee, 6 March 1864, *ORN*, I, 9, pp. 532-533.

156 James Trathen to W. A. Parker, 8 March 1864, *ORN*, I, 9, p. 537 and H. S. Borden to J. B. Breck, 8 March 1864, *ORN*, I, 9, pp. 537-538.

Sands that the blockade runners had altered their tactics and abandoned running along the shoreline. Instead they were running directly through the fleet at high speed. A light positioned on the Mound Battery was installed to assist the blockade runners in their dash for New Inlet.[157] In response, Captain Sands adjusted the stations of the vessels off New Inlet and the Western Bar.[158] A sketch submitted to S. P. Lee identified a line of nine stations aligned parallel to the shoreline and approximately five miles offshore. Beyond that line two vessels were assigned to cruise back and forth parallel to the inner line of stations and two miles further offshore. Another fast steamer was assigned to steam back and forth, four miles beyond those and along a line parallel to the northern steamer in the secondary line. The steamers USS *Nansemond*, USS *Britannia* and USS *Kansas* occupied the center stations of the inshore line and the USS *Mount Vernon* and USS *Niphon* guarded the southern and northern extremities respectively. The two steamers on the second line were the USS *Tuscarora* and the USS *Grand Gulf* and the offshore vessel east of the USS *Grand Gulf* was the USS *Fort Jackson*.[159]

Sands also rearranged the stations on the south side of the Cape Fear. There the Bald Head Light served the same purpose as the Mound Battery light. Off the Western Bar seven vessels were stationed approximately five miles offshore in a line that roughly paralleled the shoreline of Oak and Smith islands. The center of the line was held by the USS *State of Georgia* and the east and west ends by the USS *Victoria* and USS *Calypso* respectively. Another mile offshore, the USS *Fort Jackson* was occasionally assigned to cruise back and forth parallel to the inshore line of stations.[160]

By May twenty ships were assigned to blockade Wilmington. Ten were assigned to guard New Inlet and five were stationed off the Western Bar. The remaining four vessels were responsible for cruising offshore. On the north side of the Cape Fear they cruised along the line vessels took running to and from Bermuda. On the south side of Cape Fear they cruised along the line vessels took running to and from Nassau. An additional five vessels assigned to the Wilmington Squadron were away from the blockade for repairs.[161] In

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157 B. F. Sands to S. P. Lee, 5 May 1864, *ORN*, I, 9, pp. 729-731.
158 *Ibid.*
159 *Ibid.*
160 *Ibid.*
161 S. P. Lee to G. Welles, 2 May 1864, *ORN*, I, 9, pp. 719-720.

spite of the vessels in Norfolk for repairs an increase in vessel strength and speed combined with Lee's changes in strategy produced results on the Wilmington Station in May, June and July 1864. In May, five steamers were captured at sea by the vessels assigned to cruise outside the inner line of blockaders. The steamer *Young Republic* was captured by the USS *Grand Gulf* after a chase of more than six hours.[162] The USS *Connecticut* captured the steamers *Minnie* on 9 May and *Greyhound* on 10 May east and southeast of Cape Lookout.[163] On 15 May, the *Kansas* chased down the *Tristram Shandy* northeast of New Inlet and two weeks later on 30 May the USS *Keystone State* and USS *Massachusetts* captured the *Caledonia* after a three hour chase.

Throughout the summer and early fall of 1864, offshore cruisers registered the greatest success off Wilmington. With the exception of the *Georgiana McCaw*, which was driven ashore west of Fort Caswell by the USS *Maratanza*, and the *Pevensey*, run ashore on Bogue Bank by the supply steamer *New Bern*, offshore cruisers captured eight steamers between 2 June and 10 September 1864.[164] During the "dark of the moon" in early June the *Thistle* was captured by the USS *Fort Jackson* 130 miles southeast of Cape Lookout and the *Siren* was chased down by the USS *Keystone State* 80 miles east-northeast of Cape Fear.[165] Early the following month the steamer *Rouen* was captured southeast of Cape Fear by the USS *Keystone State* after a chase of four hours. Six days after the *Rouen* was captured, the USS *Fort Jackson* chased the steamer *Boston* and captured the vessel after her aging machinery failed. The following day 90 miles south of Cape Fear, the USS *Gettysburg* chased and captured the *Little Ada*.[166] During August only one vessel was captured. On the 24th, the USS *Keystone State* and the USS *Gettysburg* discovered, chased and shelled into submission a steamer at sea south of Cape Fear. The fact that the steamer was the *Lilian* provided no small amount of satisfaction as she had

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162 B. F. Sands to S. P. Lee, 10 May 1864, *ORN*, I, 10, pp. 7-8 and G. M. Ransom to Judge of the U. S. District Court, 6 May 1864, *ORN*, I, 10, p. 7.

163 J. J. Almy to S. P. Lee, 9 May 1864, *ORN*, I, 10, p. 41 and J. J. Almy to S. P. Lee, 10 May 1864, *ORN*, I, 10, p. 42.

164 Alfred Everson to M. Haxtun, 2 June 1864, *ORN*, I, 9, pp. 114-115 and T. A. Harris to S. P. Lee , 16 June 1864, *ORN*, I, 10, pp. 136-137.

165 B. F. Sands to S. P. Lee, 5 June 1864, *ORN*, I, 10, p. 120 and Pierce Crosby to S. P. Lee, 5 June 1864, *ORN*, I, 10, p. 121.

166 B. F. Sands to S. P. Lee, 8 July 1864, *ORN*, I, 10, p. 242, W. M'Gloin to R. H. Lamson, 31 July 1864, *ORN*, I, 10, p. 246 and S. P. Lee to Gideon Welles, 5 August 1864, *ORN*, I, 10, pp. 245-246.

become quite well known because of publicity and the success registered by Captain John N. Maffitt. Maffitt, however, was not on board when the little steamer was captured.[167]

Two additional vessels, the *Elsie* and *A. D. Vance* were captured at sea early in September. Like the *Lilian*, the *Elsie* was captured by the USS *Keystone State* and USS *Quaker City* after a shell exploded damaging the vessel and setting the cargo of cotton on fire.[168] The *A. D. Vance* was also captured at sea by the USS *Santiago de Cuba*. After running the guns and crew aft to trim the ship the Union steamer got within range of the *A. D. Vance*. After a shot across the bow, the *A. D. Vance* hove to and was boarded.[169]

In late September and early October three additional steamers were destroyed. The first, on 25 September, was the *Lynx*. That steamer was driven ashore by the USS *Niphon*, USS *Howquah* and USS *Governor Buckingham*. The *Lynx* steamed out of New Inlet and ran through the blockade at a high rate of speed. The USS *Niphon*, almost run down by the *Lynx*, fired into the blockade runner before it disappeared in the darkness. Next the USS *Howquah* tried to run the *Lynx* down but only succeeded in firing into the vessel as it passed. The *Lynx* passed so close to the USS *Governor Buckingham* that Captain John MacDairmid fired his revolver at the men on her bridge as the crew fired five shells at the speeding ship. Although the *Lynx*'s speed was too much for the vessels on blockade, their shots damaged the blockade runner's machinery and may have set the vessel on fire. Less than an hour later the *Lynx* was discovered ashore near Half Moon Battery in flames.[170]

Four nights later the USS *Niphon* discovered another steamer, the *Night Hawk*, heading in toward New Inlet and opened fire. In attempting to avoid the *Niphon*, that steamer ran aground on Caroline Shoal outside the inlet. A boarding party from the USS *Niphon* took the crew off after firing the vessel with coals from the boilers. Although the fires destroyed the cargo and

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167 Pierce Crosby to Gideon Welles, 24 August 1864, *ORN*, I, 10, pp. 388-389 and S. P. Lee to Gideon Welles, 26 August 1864, *ORN*, I, 10, pp. 390-391.

168 S. P. Lee to Gideon Welles, 7 September1864, *ORN*, I, 10, pp. 421-422 and Silas Casey to Gideon Welles, 6 September 1864, *ORN*, I, 10, pp. 425-426.

169 O. S. Glisson to Gideon Welles, 11 September 1864, *ORN*, I, 10, p. 453; S. P. Lee to Gideon Welles, 19 September 1864, *ORN*, I, 10, pp. 454-455 and O. S. Glisson to Gideon Welles, 20 September 1864, *ORN*, I, 10, p. 456.

170 J. W. Balch to S. P. Lee, 26 September 1864, *ORN*, I, 10, pp. 479-480; John MacDiarmid to O. S. Glisson, 26 September 1864, *ORN*, I, 10, pp. 480-481 and Edmund Kemble to Lieutenant-Commander M. Haxtun, 26 September 1864, *ORN*, I, 10, p. 481.

extensively damaged the vessel; Confederates were later able to salvage the *Night Hawk*.[171] The third vessel proved to be the *Condor* which was also run aground by the USS *Niphon* 7 October 1864. Unlike the *Night Hawk*, the *Condor* was not destroyed by a boarding party from the USS *Niphon* as a well directed fire was opened from Fort Fisher. Under the fort's protection, Confederates salvaged the *Condor*'s cargo.[172]

With the exception of the loss of the tug *Aster*, the remainder of October proved to be productive for both the New Inlet and Western Bar stations. The *Aster* was in pursuit of the blockade runner *Annie* when both vessels ran aground on Caroline Shoals. To complicate matters the tug *Berberry* fouled her propeller in attempting to rescue the *Aster*. With little hope of getting off, the officers and crew of the *Aster* burned their vessel. Light from the fire illuminated not only the *Aster*, but the crippled *Berberry* and USS *Niphon*. Fire from Fort Fisher made saving the *Aster* impossible and protected the *Annie* until Confederate salvors could remove the cargo and refloat the ship.[173]

Off the Western Bar, the USS *Montgomery* captured the Liverpool steamer *Bat* about 1 a.m. on the morning to 10 October 1864. A shell from the USS *Montgomery*'s 30-pdr Parrott hit the bow of the blockade runner wounding one of the crew and convincing the captain to surrender before another shell could be fired.[174] On 21 October, the outbound steamer *Wando* was captured about 60 miles southeast of Cape Fear by the USS *Fort Jackson*. The captain of the *Wando* surrendered after a chase of more than four hours during which the USS *Fort Jackson* fired at the steamer 98 times.[175] The

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171 S. P. Lee to Gideon Welles, 1 October 1864, *ORN*, I, 10, p. 492, Edmund Kemble to O. S. Glisson, 30 September 1864, *ORN*, I, 10, pp. 493 and E. N. Semon to Edmund Kemble, 30 September 1864, *ORN*, I, 10, pp. 493-494.

172 S. P. Lee to G. Welles, 7 October 1864, *ORN*, I, 10, pp. 531-532 and Edmund Kemble to O. S. Glisson, 1 and 2 October 1864, *ORN*, I, 10, p. 532.

173 Samuel Hall to S. P. Lee, 8 October 1864, *ORN*, I, 10, pp. 541-542; Edmund Kemble to Lieutenant J. P. Robertson, 8 October 1864, *ORN*, I, 10, pp. 542-543; Milton Griffith to S. P. Lee, 8 October 1864, *ORN*, I, 10, pp. 543-544 and Edmund Kemble to D. D. Porter, 30 October 1864, *ORN*, I, 10, p. 545.

174 E. H. Faucon to G. Welles, 10 October 1864, *ORN*, I, 10, pp. 548-549.

175 B. F. Sands to Gideon Welles, 21 October 1864, *ORN*, I, 10, pp. 578-579 and W. M'Gloin to R. H. Lamson, 31 July 1864, *ORN*, I, 10, p. 246.

following day the *Eolus* chased and captured the steamer *Hope* of Wilmington. The *Hope* was sighted attempting to cross the Western Bar about 1 a.m. and was chased seaward for more than sixty miles before surrendering.[176]

Before S. P. Lee was replaced by Rear Admiral David Dixon Porter on 12 October 1864, the First Division blockading New Inlet consisted of eleven vessels. The USS *Governor Buckingham*, USS *Daylight*, USS *Howquah* and USS *Niphon* served as bar tenders guarding the inlet. A second line of vessels, outside the bar tenders, was formed by the USS *Monticello*, USS *Mercedita*, USS *Alabama* and USS *Santiago de Cuba*. The faster USS *Keystone State*, USS *Quaker City* and USS *Gettysburg* operated as outside cruisers to intercept blockade runners before and after their attempt to pass through the blockade. The Third Division, off the Western Bar, was comprised of thirteen vessels and the steamer *Fahkee* which served as a coal tender for vessels guarding both New Inlet and the Western Bar. Five vessels, USS *Eolus*, USS *Anemone*, USS *Victoria*, USS *Emma* and USS *Dumbarton* were stationed close in on the bar. The USS *Fort Jackson*, USS *Maratanza*, USS *Montgomery*, USS *Aries* and USS *Vicksburg* formed the second line of vessels. Beyond that second line the USS *Calypso*, USS *Mount Vernon* and USS *Kansas* cruised the most commonly used course to Nassau.[177]

After Rear-Admiral David D. Porter took over the North Atlantic Blockading Squadron, he made changes in the strategy developed under Acting Rear-Admiral Lee's command. In his "General Orders Number 18," Porter expressed his desire to have an equal number of vessels assigned to New Inlet and the Western Bar. The slowest vessels assigned to each side of Cape Fear were to be stationed near the bars to fire on blockade runners attempting to pass in or out and signal their presence and course to the faster vessels of the division. Vessels tending the bars were not to chase blockade runners off shore. Instead they were to abandon pursuit as soon as the chase was taken up by one of the faster vessels lying offshore.[178]

Vessels assigned to guard the bar were also charged with being careful to "ascertain the position of each and every blockader, so that there will be no danger of collision or firing into each other." Once a steamer had been

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176 B. F. Sands to D. D. Porter, 23 October 1864, *ORN*, I, 10, pp. 592-593 and W. O. Lundt to Gideon Welles, 23 October 1864, *ORN*, I, 10, p. 593.

177 S. P. Lee to Gideon Welles, 1 October 1864, *ORN*, I, 10, pp. 514-515.

178 General Orders No. 18, D. D. Porter, 22 October 1864, *ORN*, I, 10, pp. 579-583.

identified and the second line warned, vessels on the bar were to "get in between her and the bar" to prevent the blockade runner's return to the safety of the Cape Fear River. "Bar tenders" were to take up a position as close to the bar as prudent once twilight provided protection from Confederate batteries. No lights were to be shown and no noise was permitted while on station. Each gunboat guarding the bar was to deploy a "good, swift boat" in fair weather to cruise over the bar and warn of vessels. Each of the boats was to be well armed and equipped with a boxed lantern with a bright red lens to signal the bar tenders when vessels were observed attempting to escape.[179]

Once a blockade runner had been identified, Porter instructed the officers of the Cape Fear divisions to signal the course of each chase using rockets and Coston's signals. Porter provided the following uniform signals to minimize the confusion inherent in firing a single rocket in the direction of the chase.

Direction of Chase	Signal
Northward	1 rocket
Northeastward	2 rockets
Eastward	1 rocket and green Coston
Southeastward	2 rockets and green Coston
Southward	2 rockets and white Coston
Southwestward	2 rockets and red Coston
Westward	1 rocket and red Coston
Northwestward	1 rocket and white Coston

When in pursuit blockade vessels were to periodically send rockets horizontally in the direction of the chase.[180]

In thick weather when visibility was limited, steam whistles were to be used to convey the direction of a blockade runner. Porter issued the following signals for close weather.

Direction of Chase	Signal
Northward	1 short whistle
Northeastward	1 long whistle
Eastward	2 long whistles
Southeastward	1 long and 1 short whistle
Southward	3 long whistles
Southwestward	1 short and 1 long whistle
Westward	3 short whistles
Northwestward	2 short whistles

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179 *Ibid.*
180 *Ibid.*

Porter also supplied the Cape Fear blockade vessels with recognition signals. Those signals were designed to provide some assurance that vessels of the Cape Fear divisions could identify each other before chasing or firing on a friend. Porter's attention to clarifying the recognition codes was, no doubt, associated with the fact that the steamer USS *Aries* fired into the USS *Fort Jackson* three times on 29 October after failing to receive or recognize answers to her challenges.[181] Those signals consisted of the following:

Day of month	Vessel Making Signal First	Vessel Answering
1	1 white flash	3 red flashes
2	2 white flashes	1 red flash
3	3 white flashes	2 red flashes
4	1 red flash	3 white flashes
5	2 red flashes	1 white flash
6	3 red flashes	2 white flashes
7	1 white flash, red burning	3 red flashes, white burning
8	2 white flashes, red burning	1 red flash, white burning
9	3 white flashes, red burning	2 red flashes, white burning
10	1 red flash, white burning	3 white flashes, red burning

In thick weather when limited visibility precluded visual signaling, steam whistles were to be used to make recognition signals.[182]

Day of month	Vessel Making Signal First	Vessel Answering
1	1 short whistle	4 long whistles
2	2 short whistles	1 long whistle
3	3 short whistles	2 long whistles
4	4 short whistles	3 long whistles
5	1 short, 1 long whistle	4 long, 1 short whistle
6	2 short, 1 long whistle	1 long, 1 short whistle
7	3 short, 1 long whistle	2 long, 1 short whistle
8	4 short, 1 long whistle	3 long, 1 short whistle
9	1 long, 1 short whistle	1 short, 1 long whistle
10	2 long, 1 short whistle	1 short, 2 long whistles

As a last resort the blockade vessels were to resort to Coston's signals to identify each other at night or in thick weather. Those signals were to follow another recognition code supplied by Porter.

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181 Abstract Log of the U.S.S. *Fort Jackson*, 29 October 1864, *ORN*, I, 10, pp. 10-11 and Abstract Log of the U.S.S. *Aries*, 29 October 1864, *ORN*, I, 11, p. 11.

182 General Orders No. 18, D. D. Porter, 22 October 1864, *ORN*, I, 10, p. 581.

Day of month	Vessel Making Signal First	Vessel Answering
1	Coston's No. 1	Coston's No. 2
2	Coston's No. 2	Coston's No. 3
3	Coston's No. 3	Coston's No. 4
4	Coston's No. 4	Coston's No. 5
5	Coston's No. 5	Coston's No. 6
6	Coston's No. 6	Coston's No. 7
7	Coston's No. 7	Coston's No. 8
8	Coston's No. 8	Coston's No. 9
9	Coston's No. 9	Coston's No. 0
10	Coston's No. 10	Coston's No. 1

Porter's signal for warning the fleet of danger was the firing of a gun and burning a blue light.[183] Unfortunately, the number of rockets and Coston's signals required by Porter created a shortage that compromised the system of communication.[184]

Porter ordered that one or two fast vessels be kept offshore approximately 40 miles to the east and west of the Cape Fear inlets during the night. During the day those vessels were to cruise along the shore to look out for blockade runners lying to or anchored and waiting for night to run through the blockade. At night those vessels were to occasionally burn false signals resembling the lights of the Cape Fear lighthouses. Those signals were designed to "lead blockade runners astray" and increase the rate of captures. Later Commander Daniel Ammen suggested a more complex replication of the light system used by Confederates at Fort Fisher. Ammen proposed to use lights on vessels stationed off Masonboro Inlet to attract blockade runners and convince them that they were safe under the guns of Fort Fisher.[185]

Powerful calcium lights were also supplied to vessels of the Wilmington Station. They were to be mounted on the forecastle and used to illuminate blockade breakers attempting to cross the bar or being chased at night. To facilitate identification of steamers on the blockade, Porter ordered that "the pipes, hulls, and all parts of blockaders should be painted one uniform color."[186] Each officer was also supplied with charts of the Cape Fear area so that the point of identification and course of each chase could be identified and

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183 *Ibid.*

184 D. Ammen to D. D. Porter, 28 November 1864, *ORN*, I, 11, pp. 100-101.

185 General Orders No. 18, D. D. Porter, 22 October 1864, *ORN*, I, 10, pp. 581 and D. Ammen to D. D. Porter, 28 November 1864, *ORN*, I, 11, pp. 100-101.

186 General Orders No. 18, D. D. Porter, 22 October 1864, *ORN*, I, 10, p. 583.

sent to Porter. Porter proposed to use that information to identify patterns of operation that could be disrupted by the vessels of the Wilmington Station. Officers were also to keep close track of the tides and maintain more intense vigilance near times of high water although, Porter cautioned that the "class of vessels now employed in illicit trade do not draw much water and can be run in and out at any time."[187] Orders also called for the destruction of all vessels "run on shore at the bar, or beached." "At all hazards" officers were to destroy ships that could not be captured and refloated.[188]

Realizing the importance of the outside line of blockaders, Porter issued specific instructions for their operations. Those instructions were based on the observation that blockade runners would "likely try to cross the bar after dark or in the twilight." By calculating their speed at approximately thirteen knots, Porter established the position of two outer lines along an arc offshore where outbound vessels would be at daylight and where inbound vessels would be between early afternoon and dusk to gauge their run through the blockade and make the bar around dawn.[189] If nothing was sighted at dawn vessels on the off shore line were ordered to cruise in toward shore for approximately twenty miles to identify blockade runners that might have run out as late as midnight. If no blockade runners were identified, they were to return to their stations and keep a lookout during the day for inbound vessels. To reduce the possibility of being spotted first, lookouts stationed aloft were ordered to wear light colored clothes.[190]

Each ship on the outside lines was ordered to chase until any reasonable hope of capture was lost. Although the practice contributed to fouling fire tubes and several captains had been censured by S. P. Lee for abusing their machinery in efforts to get more speed out of their vessels, Porter authorized the use of pine wood to speed up the process of bringing boilers to full capacity. Each vessel was to carry a supply of pine specifically for that purpose.[191] When in chase captains were also instructed to take every opportunity to keep blockade runners from getting their "head to wind and sea" or running "before or off the wind." Running to windward increased draft on the boilers and

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187 General Orders No. 18, D. D. Porter, 22 October 1864, *ORN*, I, 10, p. 582.
188 *Ibid.*
189 *Ibid.*
190 *Ibid.*
191 *Ibid.*

running with the wind permitted the use of fore-and-aft sails to increase stability and speed. With more than one vessel in chase, captains were encouraged to try to keep blockade runners "in the trough of the sea" to minimize their speed.[192]

While Porter's strategy for blockading Wilmington was essentially that developed under S. P. Lee's command, his approach was perhaps more systematic. Three vessels were captured during the "dark of the moon" at the end of October and the first week of November. The outbound *Lady Sterling* was sighted passing over the Western Bar by the *Eolus*. Both the USS *Calypso*, responding to the *Eolus'* rockets, and the *Eolus* chased the *Lady Sterling* more than two hours before the *Calypso*'s guns damaged the blockade runner's machinery and set the cargo on fire. The *Lady Sterling* was forced to surrender.[193] Off New Inlet the steamer *Annie* was captured the same day. The *Annie,* repaired after having been run aground on Caroline Shoals earlier in October, was outbound with 540 bales of cotton and 30 tons of tobacco. The *Annie* was discovered coming out of New Inlet just after sunset by the USS *Niphon*. Gunfire of the USS *Niphon* attracted the attention of the crew of the tug *Wilderness* which joined in the chase. The USS *Wilderness* quickly overtook the *Annie*. After a chase of only thirty minutes and thirteen rounds from the USS *Niphon* and USS *Wilderness*, the *Annie*'s captain threw the ship's papers, mail and $50,000 in gold overboard and surrendered.[194]

In spite of the value of the prize Rear-Admiral Porter issued a stern reprimand that chastised the captains of the USS *Niphon* and USS *Wilderness* for failing to properly alert the fleet using the signals authorized in October. It was the opinion of the senior officer at New Inlet, Lieutenant-Commander P. G. Watmough, that the officers "failed to make the proper, or any, signals indicating the direction of the chase, in order to be able to claim a sole share in her."[195]

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192 *Ibid.*

193 W. O. Lundt to Gideon Welles, 29 October 1864, *ORN*, I, 11, p. 5, F. D. Stuart to D. D. Porter, 29 October 1864, *ORN*, I, 11, pp. 6-7 and B. F. Sands to D. D. Porter, 29 October 1864, *ORN*, I, 11, pp. 7-8.

194 E. Kemble to D. D. Porter, 1 November 1864, *ORN*, I, 11, pp. 32-33 and Henry Arey to D. D. Porter, 1 November 1864, *ORN*, I, 11, p. 36.

195 P. G. Watmough to D. D. Porter, 3 November 1864, *ORN*, I, 11, p.37.

Rear Admiral S. P. Lee had justifiably referred to the North Atlantic Blockading Squadron as the "prize money command" having earned a total of $109,689.69 as his share of vessels condemned and auctioned as prizes under his command.[196] When the USS *Connecticut* captured the blockade runners *Minnie* and *Greyhound* off Wilmington in May 1864, the reward was staggering. Condemned and auctioned the *Minnie* and *Greyhound* and their cargoes of cotton, tobacco, and turpentine brought $353,943.42 and $497,858.55 respectively.[197] Once the costs of litigation were deducted the United States received one half of the remaining funds.

After deduction of adjudication expenses of $12,896.54 and deduction of the government's fifty per cent, a total of $242,481.00 remained to be shared from the *Greyhound* alone. Admiral Lee received $12,124.05 and recently appointed senior officer Captain Benjamin Sands' share came to $2,424.81. The largest share, $24,248.10, was allocated to Commander John J. Almy, the *Connecticut*'s captain. Commander Almy's share represented the equivalent of ten years pay at his rank. The remainder of the officers and crew of the *Connecticut* received amounts proportional to their annual pay rate. A lieutenant was awarded $6,366.09 and an able seaman drew $733.38. A first class boy, frequently receiving only eight or nine dollars a month, was awarded $407.44.[198]

While not all captured blockade runners produced this kind of reward the average steamer generated approximately $200,000 for those sharing in the capture. Rewards like those shared from the *Greyhound* provided considerable incentive. Yet, at the same time prize money generated intense competition and occasionally considerable animosity. As all vessels within signaling distance of a capture shared in the prize, claims periodically had to be settled by boards of inquiry. Porter's General Order No. 41 made it clear that "this is not being conducted for the benefit of officers or to enrich them by the capture of prizes..."[199]

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196 Robert W. Daly, "Pay and Prize Money in the Old Navy, 1770-1899." *United States Naval Institute Proceedings*, Vol. 74, August 1948, p. 270.

197 Prize Accounts of the Fourth Auditor, General Records of the Department of the Treasury, Record Group 56, NA, 2, pp. 436-442 and "Report of the Secretary of the Navy," 1865, p. 507.

198 Prize Accounts of the Fourth Auditor, General Records of the Department of the Treasury, Record Group 56, NA, 2, pp. 436-442 and "Report of the Secretary of the Navy", 1865, p. 512.

199 General Orders No. 41, D. D. Porter, 9 November 1864, *ORN*, I, 11, pp. 37-38.

The USS *Santiago de Cuba* captured another valuable prize on 2 November 1864. That vessel proved to be the steamer *Lucy* bound for Nassau and fourteen hours out of Wilmington. The *Lucy* was loaded with 414 bales of cotton and 25 tons of tobacco. The prize produced $268,948.20 when adjudicated and only the officers and crew of the USS *Santiago de Cuba* were entitled to shares.[200] Although the fact that the *Lucy* was discovered fourteen hours out of Wilmington seemed to confirm the wisdom of Porter's strategy, no other vessels were captured or destroyed in November 1864. Several were however, successful in passing in through New Inlet and across the Western Bar.[201]

A full month after the *Lucy* was captured, the steamer *Vixen* was taken eighty miles south of Cape Fear by the USS *Rhode Island*. The *Vixen* initially pulled away from the USS *Rhode Island* but after dark the blockade runner was discovered broken down and unable to make way. Both paddle wheels had been disabled due to a combination of heavy seas and the speed of the chase.[202] Malfunctioning feed pumps disabled the steamer USS *Emma Henry* and permitted the USS *Cherokee* to capture that outbound vessel almost a week later on 10 December.[203] On 4 December, the USS *R. R. Cuyler*, USS *Gettysburg* and USS *Mackinaw* captured the outbound steamer *Armstrong* approximately 140 miles south-southeast of Cape Fear.[204]

Vessels maintaining the inshore blockade were also successful during the first week of December 1864. On 2 December, the USS *Pequot* discovered a blockade runner near Little River Inlet. After a chase east to the vicinity of Shallotte Inlet the chase headed southeast to the point of Frying Pan Shoals and then turned north-northwest and ran along the shoal. The next morning Lieutenant-Commander D. L. Braine found the steamer ashore approximately 1.5 miles southwest of Bald Head Point. At dawn the crew of the tug *Emma* had discovered the blockade runner heading for the Western Bar and chased the vessel ashore on Smith Island. After dawn the *Emma*, USS *Pequot*, USS *Huron*, USS *Chippewa*, USS *Britannia*, USS *Aries* and USS *Tristram Shandy*

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200 O. S. Glisson to Gideon Welles, 2 November 1864, *ORN*, I, 11, pp. 44-45.

201 Frank Smith to D. D. Porter, 23 November 1864, *ORN*, I, 11, p. 88 and W. O. Lundt to G. W. Young, 7 November 1864, *ORN*, I, 11, p. 51.

202 S. D. Trenchard to D. D. Porter, 5 December 1864, *ORN*, I, 11, pp. 118-119.

203 W. E. Dennison to G. Welles, 10 December 1864, *ORN*, I, 11, pp. 182-183.

204 D. D. Porter to G. Welles, 9 December 1864, *ORN*, I, 11, pp. 136-137; R. H. Lamson to G. Welles, 4 December 1864, *ORN*, I, 11, p. 137 and C. H. B. Caldwell to G. Welles, 4 December 1864, *ORN*, I, 11, p. 138.

shelled the vessel. The following night a boarding party from the *Emma* boarded the wreck and discovered that the vessel was the *Ella*. After searching the ship for papers and other evidence, the vessel was set on fire and shells set to destroy the machinery.[205]

On the morning of 7 December, the USS *Kansas* discovered a steamer aground on the outer edge of Caroline Shoals off New Inlet. As the guns of Fort Fisher prevented getting in close and the seas were breaking over the vessel, the crew of the USS *Kansas* contented themselves with shelling the wreck from long range.[206] That vessel proved to be the steamer *Stormy Petrel*. During the night the *Stormy Petrel* had passed through the blockade undiscovered but had miscalculated making the entrance to New Inlet and grounded hard on the shoal. Near daylight the officers and crew abandoned the ship and escaped to Fort Fisher.[207] On 27 December, the *Agnes E. Fry* was also discovered inside the blockade but aground on Oak Island west of Fort Caswell.[208] Destruction of the steamer was prevented by the guns of Fort Caswell and Confederates immediately removed the cargo and tried to organize an effort to salvage the machinery.[209]

By December 1864, 48 vessels were assigned to the Cape Fear Station.[210] In spite of the number of ships enforcing the blockade, steamers continued to run in and out successfully. The *Wild Rover, Owl, Hansa, Stag, Vulture, Banshee II, Little Hattie,* and *Talisman* were all operating out of Wilmington in December.[211] It was clear that the Cape Fear had not been closed by blockade.

Wilmington finally became a strategic priority for the War Department in October 1864. With General William T. Sherman marshaling his forces for a campaign into North Carolina, control of that port city and the railroads connecting Wilmington to Florence, South Carolina and Weldon, North Carolina became an important objective. After years of unsuccessful urging by

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205 D. D. Porter to Gideon Welles, 9 December 1864, *ORN*, I, 11, p. 131; D. L. Braine to D. D. Porter, 4 December 1864, *ORN*, I, 11, pp. 126-127; T. C. Dunn to G. W. Young, 3 December 1864, *ORN*, I, 11, p. 127; G. W. Young to D. D. Porter, 4 December 1864, *ORN*, I, 11, pp. 127-128; G. W. Young to D. D. Porter, 6 December 1864, *ORN*, I, 11, p. 131 and I. S. Sampson to T. C. Dunn, 6 December 1864, *ORN*, I, 11, pp. 132-133.

206 P. G. Watmough to D. D. Porter, 7 December 1864, *ORN*, I, 11, pp. 154-155.

207 Extracts from Colonel Lamb Diary, 7-14 December 1864, *ORN*, I, 11, p. 745.

208 Edward Keyser to D. D. Porter , 27 December 1864, *ORN*, I, 11, pp. 385-386.

209 Braxton Bragg to Pinkney, 29 December 1864, *ORN*, I, 11, p. 788.

210 D. D. Porter to Gideon Welles, 5 December 1864, *ORN*, I, 11, pp. 140-142.

211 Extracts from Colonel Lamb Diary, 1-31 December 1864, *ORN*, I, 11, pp. 744-747.

Secretary Welles and proposals by officers of the North Atlantic Blockade Squadron, Wilmington was finally taken. In anticipation of a joint operation and to placate General U. S. Grant, the Navy Department had replaced the conservative and cautious Acting Rear-Admiral S. P. Lee with Rear-Admiral David D. Porter.[212] Finally, the "importance of closing Wilmington and cutting off Rebel communication [had become] paramount to all other questions."[213] By 20 October, Porter felt that the Navy was ready to support the expedition but, Grant was not disposed to commit the necessary troops until December.[214]

Grant placed Major-General Godfrey Weitzel in command of the expedition, however his superior Major-General Benjamin F. Butler, elected to lead the attack. Butler also proposed to incapacitate the garrison at Fort Fisher by exploding a vessel full of powder prior to an amphibious landing on the beach north of the massive Confederate fortification.[215] Although detractors of the plan produced extensive evidence of the impracticality of the project, it was approved.[216] At 1:45 a.m. on the night of 23 December 1864, the gunboat *Louisiana,* containing 235 tons of powder, was blown up off the beach northeast of Fort Fisher.[217] In spite of Butler's dire predictions concerning the effect, there was no impact on the garrison at Fort Fisher. Colonel Lamb recorded in his diary "a blockader got aground near fort, set fire to herself & blew up."[218]

At 11:30 a.m. the following day Porter's vessels, the largest American fleet ever assembled, moved into predetermined positions off Fort Fisher. After armored vessels anchored within a mile of the fort and drove the garrison into their bombproof shelters, the remainder of the fleet took up their stations and joined in shelling Colonel Lamb's defenses.[219] For two days the fleet kept up a bombardment so intense that Porter reported "it was impossible for anything human to stand it." In all 20,271 projectiles of all calibers and

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212 Welles, *Diary,* Vol. 2, pp. 127-129 and pp. 146-147.

213 Welles, *Diary,* Vol. 2, p. 146.

214 D. D. Porter to Gideon Welles, 13 October 1864, *ORN,* I, 10, p.563 and *ORA,* I, 42, pp. 835-836.

215 Butler, *Autobiography,* p. 800.

216 Richard Delafield to C. A. Dana, 18 November 1864, *ORN,* I, 11, pp. 207-214 and W. N. Jeffers to H. A. Wise, 23 November 1864, *ORN,* I, 11, p. 215.

217 A. C. Rhind to D. D. Porter, 26 December 1864, *ORN,* I, 11, pp. 226-227 and D. D. Porter to Gideon Welles, 26 December 1864, *ORN,* I, 11, pp. 254-260.

218 Diary of Colonel Lamb, 24 December 1864, William Lamb Papers.

219 General Order No. 70, D. D. Porter, 10 December 1864, *ORN,* I, 11, pp. 245-247 and D. D. Porter to Gideon Welles, 26 December 1864, *ORN,* I, 11, pp. 254-260.

weighing 1,275,299 pounds were fired.[220] Colonel Lamb later wrote, to the contrary, that: "Never since the invention of gunpowder, was there so much harmlessly expended...."[221] When Butler's amphibious force of 2,300 approached Fort Fisher on the afternoon of 25 December they found that little damage had been done and the garrison and most of the land face guns were waiting for their assault.[222] After consideration of his position Butler ordered a retreat and Porter reluctantly withdrew the fleet.[223] During the night before Christmas and in spite of the assembled fleet, the blockade runner *Little Hattie* ran in through New Inlet without incident.[224]

As a flurry of correspondence designed to establish responsibility for the failed assault arrived in Washington, D. C., Colonel Lamb used his limited resources to repair Fort Fisher. Once General Grant decided to replace both Butler and Weitzel, a second attack was organized. General Alfred E. Terry would command the army expedition and lead the second attack.[225] The fleet carrying Terry's troops assembled at Beaufort during the first week of January 1865. On the night of 12 January, Porter's fleet of over sixty warships carrying 627 guns arrived off Fort Fisher.[226] The following morning the beach was shelled north of Fort Fisher and General Terry's force was landed.[227] Porter's fleet then initiated a second attack shelling the fortifications for two days while Terry moved into position north of the Confederate defenses. On the morning of 15 January, the fleet shifted its fire to the land face and at 10 a.m. a force of 400 marines and 1600 sailors was landed to assist in the assault.[228] As the fire of the fleet lifted, the sailors and marines attacked the northeast bastion drawing the Confederates' attention and a murderous fire. At the same time Terry's force launched an attack on Shepherd's Battery at the northwest extremity of

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220 *Ibid.*, Compilers Note, *ORN*, I, 11, p. 441 and Butler to Grant, 3 January 1865, *ORA*, I, 42, Part 1, p. 968.

221 Lamb, "Defense of Fort Fisher, North Carolina." *The Military Historical Society of Massachusetts*. Vol. 9, Boston, 1912, pp. 363-365.

222 Butler to Grant, 27 December 1864, *ORA*, I, 42, Part 1, p. 968.

223 D. D. Porter to G. Welles, 31 December 1864, *ORN*, I, 11, pp. 265-267 and Butler to Grant, 3 January 1865, *ORA*, I, 42, Part 1, p. 968.

224 Diary of Colonel Lamb, 24 December 1864, William Lamb Papers.

225 U. S. Grant to D. D. Porter, 30 December 1864, *ORN*, I, 11, p. 294.

226 "The Opposing Forces at Fort Fisher, N. C.," *Battles and Leaders of the Civil War*, Vol. 4, p. 662.

227 D. D. Porter to Gideon Welles, 14 January 1864, *ORN*, I, 11, pp. 432-433.

228 D. D. Porter to G. Welles, 17 January 1864, *ORN*, I, 11, pp. 436-442.

the land face of the fortification. Hand to hand fighting inside the giant earthworks continued from traverse to traverse until the surviving Confederate defenders had been driven to Battery Buchanan. Without hope of reinforcement or the means to continue to resist, Major James Reilly surrendered Fort Fisher at 10 p.m.[229]

The fall of Fort Fisher caused the collapse of the Lower Cape Fear Defense System and Fort Caswell was destroyed and abandoned during the night of 15 January. On 18 January, Porter ordered Lieutenant-Commander W. B. Cushing to Smithville to occupy the town and secure the Western Bar entrance to the Cape Fear. The following day, Porter wrote to Rear-Admiral J. A. Dahlgren that with Union gunboats in the river "the place is hermetically sealed."[230] He also ordered that the system of range lights that had been used to guide blockade runners into port be "trimmed in a normal manner" to facilitate trapping any vessels that might not have been informed of the fall of Wilmington.[231] That night the blockade runners *Stag* and *Charlotte* ran through the fleet off the Western Bar and anchored off Smithville. Both were surprised and taken without incident by Lieutenant-Commander Cushing.[232] Early in the morning on 25 January 1865, the steamer *Blenheim* was discovered anchored under the Mound Battery off New Inlet. That vessel, the last captured off Wilmington during the war, was taken by two converted blockade runners the *Tristram Shandy* and *Lilian*.[233]

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229 *Ibid.*

230 D. D. Porter to J. A. Dahlgren, 19 January 1864, *ORN*, I, 11, p. 615.

231 D. D. Porter to G. Welles, 20 January 1864, *ORN*, I, 11, pp. 618-620.

232 D. D. Porter to G. Welles, 20 January 1864, *ORN*, I, 11, p. 620.

233 F. M. Green to D. D. Porter, 26 January 1865, *ORN*, I, 11, p. 700 and J. S. Gelett to G. Welles, 25 January 1865, *ORN*, I, 11, pp. 700-701.

Chapter III The Anglo-Confederate Blockade Runners

News of the attack on Fort Sumter and Abraham Lincoln's declaration of a blockade of Confederate ports from North Carolina to Texas was received with mixed emotions in the South. Most southerners, like many in the North, felt that it would be impossible for the United States Navy to blockade the Confederacy. Most felt that the war would not last long and that Great Britain and/or France would intervene in breaking the blockade because of their dependence on cotton and other southern raw materials. During 1861 and until the summer of 1862, a time when the blockade was virtually nonexistent and least effective, southerners initiated a self imposed blockade of considerable effect. That blockade was in the form of a quasi-official embargo on the exportation of cotton, the most important economic asset of the South. That unofficial embargo on the exportation of cotton virtually eliminated foreign commerce by removing foreign access to cotton that supported the mills of Great Britain. Only the availability of naval stores and other agricultural exports like tobacco kept southern trade alive.

Southerners strongly believed in the potential economic and political power of "King Cotton." Southern confidence in the power of "King Cotton" was based on the fact that for decades southern cotton had provided the very foundation of the "industry which appeared to underlie the whole industrial and economic system of Great Britain."[1] In *The Cotton and Commerce of India Considered in Relation to the Interests of Great Britain, etc.,* John Chapman pointed out that £29,000,000 of Great Britain's total exports of £54,000,000 consisted of cotton fabric in 1851. Another £20,000,000 in cotton material was sold in Britain. Eight years later the London *Economist* reported that £48,209,000 in cotton products were exported. That was calculated to be approximately 40% of Great Britain's total exports.[2] In 1860, almost 80% of the cotton produced in the South was purchased by British textile firms. Those firms employed almost five million, and produced revenues of over £59 million.[3] British economists frequently cautioned that disruption of the supply

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[1]Frank L. Owsley, *King Cotton Diplomacy,* University of Chicago Press, Chicago, 1931, p. 6.

[2] Owsley, *King Cotton Diplomacy,* p. 7.

[3] Wise, Stephen R., *Lifeline of the Confederacy,* University of South Carolina Press, Columbia, South Carolina, 1988, p. 11.

of southern cotton could spell disaster and as Henry Ashworth wrote, could "amount to irretrievable ruin-millions of our countrymen would become deprived of employment and food-and, as a consequence, the misfortune would involve this country in a series of calamities, politically, socially, and commercially, such as cannot be contemplated without anxiety and dismay."[4]

The significance of those figures and opinions was not lost on Confederate politicians, merchants and economists. Southern writers quickly adopted the phrase "Cotton is King" from writer David Christy.[5] Publications like *J. D. B. DeBow's Review* published articles relating British concerns about their dependence on southern cotton and promoting the importance of cotton as a vehicle for political and economic agendas of the South. An almost universal consensus seemed to hold that England would not permit the supply of Southern cotton to be interrupted. During a visit to the newly established Confederate States of America, William H. Russell found that many southerners shared Jefferson Davis' opinion that if the supply of southern cotton was interrupted, England "would in less than six months be starved into subjection."[6] In Charleston, Russell was informed that "....John Bull.... will make a great fuss about non-intervention at first, but when he begins to want for cotton he will come down off his perch."[7] Another Charlestonian informed Russell that "...we have only to shut off your supply of cotton for a few weeks and we can create a revolution in Great Britain."[8]

That philosophy led southern leaders to react to Lincoln's declaration of a blockade with an embargo designed to cut off Europe's cotton supply and force Great Britain and France to break the blockade and recognize the Confederacy. Southern newspapers were filled with support for the embargo and encouraged farmers and merchants to keep their cotton off the market until the blockade was broken. North Carolina newspapers "begged State authorities" to prevent "*British*" from carrying cargoes "composed of articles of which our enemies stood greatly in need."[9] Both the *Wilmington Journal* and

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4 Owsley, *King Cotton Diplomacy*, p. 11.
5 David Christy, *Cotton is King*, Moore, Wilstach, Keep & Company, Cincinatti, Ohio, 1855.
6 Jefferson Davis: *A Memoir by His Wife*, New York, 1890, Vol. II, p. 160.
7 William H. Russell, *My Diary North and South*, London 1863, p. 70.
8 Russell, *My Diary North and South*, p. 51.
9 *Wilmington Journal*, 22 August 1861, p. 4, col. 5.

the *New Bern Progress* reported that goods were finding their way to northern ports by both direct shipment and through British ports such as Halifax.[10]

On 27 July 1861, the "Committee on Foreign Affairs" was instructed by President Davis "to inquire into the expediency of reporting a bill to prevent the exportation of cotton, tobacco, and naval stores."[11] Although the Confederate Congress decided against the passage of legislation to prevent the exportation of those products, the idea was not abandoned. The Ways and Means Committee considered a resolution to restrict the accumulation of cotton and naval stores at southern ports. While the express purpose was to prevent those resources from becoming a target of opportunity for the United States, the underlying consideration was to use cotton as leverage for foreign intervention and recognition.[12] The Government of the Confederacy also considered several proposals to purchase all cotton produced in the south and control its sale and exportation. Although popular, those proposals also failed for a variety of political and economic reasons.[13] While no embargo was enacted, the Confederacy did pass a series of produce-loans that resulted in the transfer of 400,000 bales of surplus cotton to the Confederacy by December 1861. The popularity of that program was in no small part based on the premise that Confederate control of cotton and its exportation could be employed to influence foreign policy.[14]

Although no official embargo was ever enacted many southern states and port cities took it upon themselves to restrict the exportation of cotton. In Louisiana, Governor Thomas Moore proclaimed that no cotton would be brought into New Orleans for overseas shipment after 10 October 1861. When Judah Benjamin, Confederate Attorney-General questioned the edict, Moore responded that he was simply responding to the opinion of the citizens of that city and his state.[15] On 18 August 1862, Florida Governor John Milton wrote the Senators and Representatives of the State of Florida at Richmond that the "villainous traffic" in cotton carried on by speculators "under the plea of

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10 *Ibid.*

11 *Journal of the Confederate Congress*, Vol. I, p. 251-264 and Owsley, *King Cotton Diplomacy*, p. 32.

12 Journal of the Confederate Congress, Vol. I, p. 288 and Owsley, *King Cotton Diplomacy*, p. 33.

13 Owsley, *King Cotton Diplomacy*, pp. 32-35.

14 *Ibid.*

15 Thomas O. Moore to Judah P. Benjamin, 9 January 1862, *ORA*, IV, 1, pp. 836-837.

furnishing the people of the South with prime necessities of life should be suppressed." Milton, one of the most vocal advocates of an embargo maintained that:

> Foreign nations will not recognize the independence of the Confederate States until commerce with the Confederate States will become not only desirable but necessary to their own prosperity. Then and not till [sic] then, will our independence be recognized and suitable treaties be made to regulate our political relations and protect our commerce with other nations.[16]

Those sentiments were also reflected by the governors of North Carolina, South Carolina and Alabama.[17] On 15 October 1861, the *Richmond Enquirer* quoted a *New Orleans Delta* article that reported because Confederate and state authorities failed, local committees and municipal government authorities had stopped the exportation of cotton.[18] The self imposed embargo was extremely effective. Compared to the 1,500,000 bales of cotton that arrived in Memphis, New Orleans, Mobile, Savannah, Charleston during the fall and winter of 1860, less than 10,000 bales arrived during the corresponding period in 1861 and 1862.[19]

To reinforce the quasi-cotton embargo, Confederates enthusiastically agreed to significantly reduce the amount of cotton planted in 1862. Approximately 1,500,000 bales were picked as opposed to 4,500,000 in 1861.[20] In addition, hundreds of thousands of bales of cotton were burned to illustrate commitment to the cause of southern independence. On 22 June 1862, the British consul in Charleston reported to Lord Earl Russell that over one million bales of cotton had been put to the torch.[21] In Great Britain the perception was that the blockade was the "work of the South as much as the

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16 Governor John Milton to Florida Representatives in Richmond, 18 August 1862, *ORA*, IV, 2, p. 57.

17 Owsley, *King Cotton Diplomacy*, pp. 35-37 and 42, *Charleston Courier*, 16 January 1862 and *London Times*, 10 January 1862.

18 *Richmond Enquirer*, 15 October 1861.

19 Owsley, *King Cotton Diplomacy*, p. 42.

20 *Ibid.*

21 Bunch to Russell, No. 85, 25 June 1862, Foreign Office American, Volume 843, Public Records Office, London, hereinafter cited as PRO.

North."[22] The *London Illustrated News* questioned the purpose of fitting out vessels to run into the Confederacy if they were prevented from obtaining cotton for the outbound trip through the blockade.[23]

At the same time southerners imposed a quasi-embargo on the exportation of cotton, the Confederacy moved quickly to establish relations with traditional trading partners in Europe and the West Indies. Robert Toombs, Confederate Secretary of State, informed William L. Yancy, Pierre A. Rost and A. Dudley Mann that President Jefferson Davis had, with the consent of Congress, appointed them Special Commissioners to Europe.[24] Yancy, Rost and Mann were to make their way to Great Britain, France, Russia and Belgium, inform the governments of those countries of the formation of the Confederate States of America and seek recognition. The agents were instructed to negotiate treaties of "friendship, commerce, and navigation" and confirm that traditional trading patterns would be encouraged by nominal duties that would approximate "free trade."[25] In May, John T. Pickett was appointed as an agent of the Confederate States to Mexico to establish similar diplomatic and commercial relations.[26]

Two months later Toombs also informed Mr. Charles J. Helm that he had been appointed by President Davis as a Special Agent of the Confederate States to cultivate similar diplomatic and commercial relations with the Spanish, British and Danish islands of the West Indies.[27] Although those efforts to gain recognition failed, the work of Confederate Agents and Commissioners illustrate that the South was not unduly concerned about the impact of the blockade. In fact, Yancy, Rost and Mann pointed out in a 14 August 1861 letter to Lord Earl Russell, that the blockade was not enforced in the Gulf of Mexico for weeks after it was declared. It had also been repeatedly broken since its establishment at Wilmington, Charleston, Savannah, Mobile and New Orleans.[28] Assistant Secretary of State W. M. Browne wrote Yancy,

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22 *London Times* quoted in the *Savannah Republican*, 22 November 1861 and Owsley, *King Cotton Diplomacy*, p. 41.

23 *London Illustrated News* quoted in the Charleston *Courier*, 30 September 1861.

24 Robert Toombs to W. L. Yancy, P. A. Rost and A. D. Mann, *Messages and Papers of the Confederacy*, James D. Richardson, ed., United States Publishing Company, Nashville, Tennessee, 1905, p. 3.

25 *Ibid.*, pp. 5-7.

26 *Ibid.*, pp. 20-26.

27 *Ibid.*, pp. 26-28.

28 *Ibid.*, p. 70.

Rost and Mann in late August 1861, to provide customs reports from Wilmington, Charleston, Savannah and Pensacola to illustrate that "the blockade of the coast of the Confederate States is nominal, not real, that it is in contravention of the now universally accepted law of nations..."[29]

In a 23 September 1861 letter to Confederate Commissioner James M. Mason, Secretary of State R. M. T. Hunter pointed out that "there are more people without than within the Confederate States who derive their means of living from the various uses which are made of this important staple" and that "a war...which shuts up this great source of supply from the general uses of mankind is directed as much against those who transport and manufacture cotton as against those who produce the raw material."[30]

In a letter to Lord Earl Russell, dated 14 August 1861, Yancy, Rost and Mann confirmed that the cotton crop would be transported to Confederate ports on the Atlantic seaboard and Gulf of Mexico but, none would be shipped until "there shall be a prospect of the blockade being raised, and not before."[31]

> That both Great Britain and France have not only an interest in breaking up the present blockade of the coasts of the Confederate States, but also the means of doing so when they desire it, is perfectly manifest. It will not be surprising, therefore, if they should endeavor to effect that end by an armed intervention in American affairs.[32]

In spite of Confederate diplomatic efforts, the British Government held that "assuming that the blockade was duly notified, and also that a number of ships are stationed, and remain at the entrance of a port, sufficient really to prevent access to it, *or to create an evident danger of entering it or leaving it*, and these ships do not voluntarily permit egress or ingress, the fact that various ships

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29 William M. Browne to W. L. Yancy, P. A. Rost and A. D. Mann, *Messages and Papers of the Confederacy*, pp. 76-77.
30 R. M. T. Hunter to J. M. Mason, 23 September 1861, *Messages and Papers of the Confederacy*, p. 93.
31 W. L. Yancy, P. A. Rost and A. D. Mann to Lord Earl Russell, *Messages and Papers of the Confederacy*, p. 70.
32 R. M. T. Hunter to J. M. Mason, 8 February 1862, *Messages and Papers of the Confederacy*, pp. 171-172.

may have successfully escaped through it...will not, of itself, prevent the blockade from being an effectual one by international law."[33]

Mason also pointed out that there was "no lack of this great article of export in the interior of the Southern States" and that "if Europe is without American cotton, it is because Europe has not thought it proper to send her ships to America for cotton." The Confederate States Government had no policy to prohibit or discourage the export of cotton.[34]

John Slidell received a lengthy treatise on the Union blockade of Confederate ports from J. P. Benjamin in September 1863. Although Benjamin expressed his frustration at the lack of support for breaking the blockade he found it necessary to "renew the oft-repeated protests of this Government, lest silence be construed into acquiescence of the principles and policy avowed by one of the maritime powers of Europe, and tacitly adopted by all others." Benjamin also enclosed figures from Charleston that supported his argument that in spite of the blockade both cotton exports and customs duties had risen dramatically during the period of the blockade.[35]

Quarterly figures for the export of cotton from Charleston were:

Quarter ending	30 September 1861	24,312 pounds
Quarter ending	31 December 1861	664,716 pounds
Quarter ending	31 March 1862	351,586 pounds
Quarter ending	30 June 1862	223,709 pounds
Quarter ending	30 September 1862	701,109 pounds
Quarter ending	31 December 1862	1,551,788 pounds
Quarter ending	31 March 1863	1,401,505 pounds
Two Months ending	31 May 1863	2,197,716 pounds

Quarterly figures from Custom House receipts for Charleston were:

Quarter ending	30 September 1861	$2,181.27
Quarter ending	31 December 1861	$3,813.02
Quarter ending	31 March 1862	$12,638.99
Quarter ending	30 June 1862	$13,281.55
Quarter ending	31 December 1862	$17,183.09
Quarter ending	31 March 1863	$57,671.21
Two Months ending	31 May 1863	$69,260.20

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[33] J. M. Mason to Lord Earl Russell, 8 February 1862, *Messages and Papers of the Confederacy*, p. 297.

[34] J. M. Mason to Lord Earl Russell, 8 February 1862, *Messages and Papers of the Confederacy*, p. 300.

[35] J. P. Benjamin to John Slidell, 2 September 1863, *Messages and Papers of the Confederacy*, pp. 546-549.

There was no accounting of the goods brought in by government vessels or on government account. However, Benjamin reported that cotton and imports amounted to twice that carried on private accounts.[36]

At Wilmington, Benjamin reported that cotton exports increased from 526,824 pounds in January 1863 to 2,144,887 pounds in July 1863. Predictions for August 1863 suggested that cotton exports would exceed 4,000,000 pounds. Wilmington's average monthly foreign commerce totaled about $270,000. That amounted to approximately $3,240,000, four times the entire foreign commerce of North Carolina in 1858.[37] Benjamin also reported that Government vessels made 44 voyages through the blockade between January and September 1862, without a loss by capture.[38]

In spite of the intensity and validity of Confederate arguments for Great Britain and other foreign powers to break the blockade the efforts were unsuccessful. Although debated at length in Parliament, Great Britain steadfastly maintained their neutrality.[39] Although Queen Victoria formally recognized the state of hostilities between "certain states styling themselves the Confederate States of America and United States of America and decreed that British subjects would observe a strict neutrality in 1861, by fall 1863, Confederate hopes that Britain or France would break the blockade were fading.[40]

Commissioner Mason wrote Secretary of State J. P. Benjamin in September 1863, to express his agreement with Colin J. McRae's proposed plan for the Confederate Government to take over cotton exportation and blockade running. Mason pointed out that:

> The experience of private enterprise seems to have adjusted trade through the blockade in such a manner as to have removed much of the risk and expense. Supplies are sent from here in sailing

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36 J. P. Benjamin to John Slidell, 2 September 1863, *Ibid.*, p. 549.

37 J. P. Benjamin to John Slidell, 2 September 1863, *Ibid.*, p. 550.

38 *Ibid.*

39 Great Britain, Parliament, Hansard's Parliamentary Debates, 3rd Series, Volume CLXV (356 Vols.; London: Cornelius Buck, 1862), 1235 and Lord Russell to J. M. Mason, 2 September 1863, *Messages and Papers of the Confederacy*, p. 560.

40 Soley, *The Blockade and the Cruisers*, pp. 26-34, and W. A. Simpson, "Britain and the Blockade," *Journal of the Confederate Historical Society*, Spring, 1968, pp. 6-7.

vessels as English property, bona fide, and thence transshipped to the coast in fast sailing steamers of small draught, and they bring out cotton as return cargoes. I can see nothing to prevent the Government taking this whole business into its exclusive hands; and when the cotton is placed in one of the islands, its value is available here at once, without further risk. Under the control of a separate bureau and in charge of naval officers, it must work well. If the war is prolonged, besides supplying all the wants of the Government in Europe at a cost cheapened by the absence of the immoderate profits now reaped by private enterprise, it would bring down exchange, and thus have an important influence in strengthening our currency at home; besides, its effect upon our credit in Europe, when results were attained, would be of immense importance in a political view.[41]

Mason also pointed out that Government control of the trade would eliminate the profits enjoyed by Union merchants shipping cotton from the West Indies to New York.[42]

While southern diplomats attempted to secure foreign recognition and assistance in breaking the blockade, Confederate agents and entrepreneurs attempted to develop successful and lucrative methods of trading through the Union squadrons. Initially that trade was dominated by schooners and other fast sailing vessels. Most of them were quickly reregistered as British vessels, loaded with salt, coffee, medicine, clothing and limited amounts of war material and run into the Confederacy. There they obtained agricultural products like tobacco and naval stores for the outward voyage. Until the summer of 1862, cotton was not readily available due to the quasi-embargo.

The Federal blockade at Wilmington remained one of principal rather than practice until well into the summer of 1862. That was a consequence of focusing initial attention on blockading the epicenter of the rebellion at Charleston and efforts to arrest privateering off Cape Hatteras that led to the invasion of the North Carolina sounds. In late April 1861, the *Wilmington Daily Herald* reported that the "unsettled condition of the country" created apprehension that caused an immediate decline in the traditional southern commerce with northern ports.[43] On 1 May 1861, that same paper reported that

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41 J. M. Mason to J. P. Benjamin, 2 September 1863, *Messages and Papers of the Confederacy*, p. 560.
42 *Ibid.*
43 *Wilmington Daily Herald*, 24 April 1861.

business with Northern ports "has become almost suspended...."[44] However, the *Wilmington Journal* continued to report vessel traffic with the United States until well into the summer of 1861.

On the same date that the *Daily Herald* reported a decline in commerce with northern ports, the *Wilmington Journal* carried news of the arrival of the schooners *G. W. Grice* from Charleston and the *A. J. DeRosset* from New York and the departure of the schooners *Jonas Smith* for New York and the *A. E. Smirk* for Baltimore.[45] Vessels in port included the steamship *North Carolina*, the brigs *John Balch* loading for New York, the *John Hathaway* taking on cargo for Rio de Janeiro, the *Robert Bruce* loading for Liverpool, the *Joseph Wilson* taking on a cargo for Barbados and the *S. P. Brown* and *Tocoa* were both waiting for cargoes. Ten schooners were also in port. Two were loading for New York, two were taking on material for Baltimore and the remaining six were awaiting freight or passengers.[46]

Without Union vessels off the Cape Fear to enforce the blockade, long established patterns of trade simply continued. On 15 May, the schooner *Sea Nymph* cleared Wilmington for New York with a cargo of "naval stores and peanuts."[47] Two days later the schooner *Gold Hunter* and the sloop *C. H. Prior* arrived from Hertford, North Carolina with cargoes of corn and the ship *Thomas Watson* from Campeche, put into Wilmington in distress. The brig *Tyne* from Cardiff entered port on 20 May with a valuable cargo consisting of 300 tons of iron for the railroad and the schooner *Maracaibo* arrived from Cardenas with molasses. The schooner *Sheet Anchor* of Rockport, Maine also arrived with a cargo of lime and news that the vessel had been turned away at Charleston by the United States Navy.[48]

In June, William Guyer of Norwalk, Connecticut reported in a letter to the United States Treasury Department:

> When I left Wilmington, N C., three vessels had just arrived, one with a cargo of railroad iron from Cardiff, Wales; one with a cargo of molasses, from Cardenas; and one with a cargo of lime from Maine. The latter vessel was bound for Charleston, but finding

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44 *Wilmington Daily Herald*, 1 May 1861, p. 2, col. 3.
45 *Ibid.*
46 *Ibid.*, and *Wilmington Journal*, 2 May 1861, p. 3, col.3.
47 *Wilmington Journal*, 15 May 1861, p. 3, col. 2.
48 *Ibid.*, 20 May 1861, p. 2, col. 5.

> that harbor blockaded, put into the port of Wilmington. When I left, no blockade was established off the Cape Fear River, and I have not seen any account of any since my arrival North. Unless Wilmington is blockaded, the blockade of Charleston Harbor is a practical nullity.[49]

In June, Jacob Brewster also related that:

> While Charleston and Savannah as well as Virginia ports are blockaded, our port [Wilmington, N. C.] is overlooked. Vessels from England arrive and bring us what is wanted, our railroads distributing to every point of the compass aid and comfort to the Confederate States. Six British vessels have entered and cleared since the paper blockade was declared. One is now loading for England, her cargo furnishing funds to bring out munitions from England. More vessels are expected with railroad iron.[50]

Hiram Barney, a collector of customs at the New York Custom House informed Secretary of the Treasury S. P. Chase that:

> Two citizens of North Carolina have just passed through this city on their return home from Halifax, where they chartered British vessels for a trade between Nassau, Bermudas, and ports on the coast of North Carolina. To Beaufort, Wilmington, and New Berne, or Ocracoke, the entrance is almost unobstructed, and no blockade has been enforced or even announced. Every day vessels are passing in or out of these ports, carrying whatever cargoes they choose. British bottoms are chartered by Carolinians and carry on this trade.[51]

Less than a week later Barney penned another letter to Chase relating that he had received additional information from Mr. Benjamin Blossom to confirm that:

> Within a few days past four British vessels, direct from Nassau [New Providence], have entered the port of Wilmington, N. C., for the purpose of there receiving cargoes. One British vessel has entered Beaufort, N. C., for the same purpose. Vessels of that

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49 W. A. Guyer to Treasury Department, no date, *ORN*, I, 5, p. 746.

50 J. Brewster to the Navy Department, no date, *ORN*, I, 5, p. 753.

51 Hiram Barney to S. P. Chase, 12 July 1861, *ORN*, I, 6, p. 28.

nation have within two weeks entered this port direct from Nassau with cargoes of pitch, tar, and turpentine, evidently the product of North Carolina, thus lending confirmation to the statements of Mr. Blossom. He assures me that vessels belonging in Nassau and in the British provinces carry on an almost uninterrupted trade with the ports of New Berne, Ocracoke, Wilmington, and Beaufort, N. C...[52]

The collector wrote again on 9 August 1861, to confirm his earlier intelligence and point out that:

> ....the trade with the Bermudas by means of British vessels uninterrupted, but I have ample reason to suppose that some of our own vessels are concerned in it. It is currently reported that a schooner lately left Greenport (near Sag Harbor) [N. Y.], bound direct for Ocracoke with a general cargo. Certain it is that she sought to obtain a pilot because of his knowledge of the Carolina coast.[53]

Earlier in the summer of 1861, the brig *Ariel* of Belfast made a voyage from New York to Wilmington with a cargo of salt and "contrabands of war." On the return the *Ariel* carried out a cargo of tar and turpentine. According to the New York collector of customs the round trip "paid the owner immensely-a fortune." In August the *Ariel* departed for Baltimore intending to head to Wilmington again with a cargo of salt, contraband and arms.[54] In the South the price of salt had reached "$4 per sack" by August 1861.[55] When Henry Wilding, the United States Consul in Liverpool, interviewed some of the crew of the bark *Thomas Watson* in Liverpool, he was informed that the vessel cleared Wilmington "without seeing any of the blockading vessels".[56] Wilding also confirmed the arrival of the Fraser, Trenholm and Company steamer *Princess Royal* which had run the blockade at Beaufort, North Carolina with a

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52 Hiram Barney to S. P. Chase, 12 July 1861, *ORN*, I, 6, p. 29.
53 Hiram Barney to S. P. Chase, 9 August 1861, *ORN*, I, 6, p. 29.
54 New York Collector of Customs, 2 August 1861, *ORN*, I, 6, p. 98.
55 R. T. Waskro to Charles Moore, 6 August 1861, *ORN*, I, 6, p. 99.
56 Henry Wilding to F. M. Seward, 13 August 1861, *ORN*, I, 6, p. 101.

cargo of naval stores.[57] Another vessel, the English clipper bark *Hind* departed, allegedly for Monrovia, on 24 July with 125 cases of arms and 1,000 kegs of powder for the Confederacy.[58]

William Schouler, Adjutant-General of the Commonwealth of Massachusetts, informed William Seward on 26 August 1861, that a reliable source had reported the arrival of five North Carolina schooners in Halifax. They carried 1,400 barrels of turpentine through the blockade and one was observed "loading with herring and other 'blue nose' commodities" such as "tea, coffee, dry goods, etc." for the return to North Carolina.[59] The New Bern, North Carolina schooner *Susan Jane* also loaded a cargo at Halifax in August. It consisted of blankets, cloth, iron, steel, brogans and axes which had been purchased in New York and Boston and shipped to Halifax. In fact, J. S. Farlow of Boston informed Gideon Welles on 6 August 1861, that:

> From information that has come to my knowledge I feel well assured that parties in New York, in connection with parties in the provinces of New Brunswick and Nova Scotia, are now engaged in chartering and fitting out British schooners in those provinces, loading there with fish and other articles of contraband of war, and discharging same at Wilmington and the small ports of North Carolina, taking in return thence naval stores and tobacco.
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> This tobacco is supposed to be taken to Wilmington and the other North Carolina ports by land from Richmond and Petersburg, Va. These naval stores and tobacco thus procured are moved from the provincial ports along shore by schooners and steamers to the near-by United States ports, when by false swearing or other illicit means it is admitted free of duty as returned American productions.[60]

The *Argonaut* of Yarmouth, Nova Scotia took on a cargo of fish, shoes, soap, coffee, cotton goods and tea in August and sailed for Key West. Schooners under English colors loading at Halifax cleared for Havana, the Bahamas, the West Indies and even Key West. Clearing for those ports

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57 *Ibid.*, *ORN*, 1, 6, p. 117.

58 *Ibid.*

59 William Schouler to W. H. Seward, 26 August 1861, *ORN*, I, 6, p. 165 and John S. Keys to Gideon Welles, 3 September 1861, *ORN*, I, 6, pp. 189-190.

60 J. S. Farlow to G. Welles, 6 August 1861, *ORN*, I, 6, p. 68.

provided an explanation for their presence off the southeastern coast and provided the opportunity to run into Confederate ports with contraband cargoes.[61]

The schooner *Harriet P. Ryan* of Plymouth, North Carolina cleared Salt Cay, in the Turks and Caicos Islands, for New York with a cargo of salt in August 1861. U. S. Consular Agent C. P. Stamers informed Andrew G. Carothers, the U. S. Consul at Grand Turk that the captain of the *Harriet P. Ryan* intended to enter one of the blockaded ports along the North Carolina coast. According to the schooner's captain William Nixon, the vessel had already run the blockade twice and was employing an American flag to complete his deception.[62]

P. Godfrey confirmed the nature of the early contraband trade in a letter dated 17 August 1861. While in the vicinity of Bath, Maine, Godfrey found that:

> The design is to load for the South, make the coast of North Carolina under the British flag, lay off till a chance offers, and then run the blockade by running in under cover of the guns of Fort Macon, through Old Topsail Inlet, which is considered to have a depth of 20 feet. I further gather that the rebels are doing a very active business through the various inlets and sounds of North Carolina, thereby meeting the wants of the Army in Virginia directly through the railroad of those states. I further found the unscrupulous New England men are engaged in a lucrative business by aiding and abetting a contraband trade along the Atlantic coast from Virginia southward; that they take out papers for the West Indies, with a show of freight for that latitude, and by collusion with the rebels are taken as prizes, discharge such contraband goods as they have, are let off, pursue their voyage to their destined port, take in contraband goods, again in part, run down along the coast, fall a prey again, discharge all contraband, run out, and return to their New England port with the balance of their cargo with a show of honesty that is surprising. I also saw men whom I know to be Southern men purchasing vessels, giving a very unreasonable account as to what they were to be

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61J. S. Chauncey to S. H. Stringham, 13 September 1861, *ORN*, I, 6, pp. 205-206, M. M. Jackson to Gideon Welles, 7 September 1861, *ORN*, I, 6, pp. 227-228 and M. M. Jackson to Gideon Welles, 13 September 1861, *ORN*, I, 6, p. 210.

62C. P. Stamers to A. G. Carothers, 22 August 1861 and M. M. Jackson to G. Welles, 13 September 1861, *ORN*, I, 6, p. 210; pp. 229-230; C. P. Stamers to A. G. Carothers, 26 August 1861, M. M. Jackson to Gideon Welles, 13 September 1861, *ORN*, I, 6, pp. 230-231.

> used for, making up sham cargoes in order to get out of port. It was suggested to me by reasonable parties that the Federal Government must have agents in the various seaports who are sharper than any we have now in some of them.[63]

The 22-ton schooner *William H. Northrup* of Wilmington continued to successfully trade with the Bahamas and West Indies in spite of the Cape Fear blockade. On 27 April, the *Northrup* returned to Wilmington from Eleuthera shortly after the declaration of the blockade. The *William H. Northrup* carried a cargo of fruit and was not aware of the declaration of a blockade until arriving in Wilmington.[64]

On 29 August 1861, F. W. Seward informed Gideon Welles that the U. S. Consul at Nassau had reported the repeated arrival of the schooner *William H. Northrop* from Wilmington. The *William H. Northrop* arrived with the Confederate flag flying and a cargo of lumber, peanuts and brand.[65] The *William H. Northrup*'s prominent display of Confederate colors was reported in the *Wilmington Journal* on 9 September 1861.[66] On the return trip to Wilmington the schooner carried out a cargo of coffee, sugar and 500 bushels of salt. [67] On 31 October, the *William H. Northrop* left Wilmington with a cargo of rice and lumber and sailed to Havana. There the vessel's captain, Joseph A. Silliman of Wilmington, sold the cargo and loaded coffee, drugs and other sundry material for the return trip to North Carolina.[68] After stopping in Nassau, where Joseph Roberts had been issued a Certificate of British Registry for the schooner on 12 August 1861, Captain Silliman headed the *William H. Northrup* for Cape Fear. Within 25 miles of Cape Fear the *William H. Northrop* was intercepted by the bark *Fernandina* and taken as a prize. Acting Volunteer Lieutenant George Brown of the *Fernandina* reported that the North Carolina built vessel had cleared for New York.[69]

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[63]N. P. Godfrey to G. Welles, 17 August 1861,M. M. Jackson to Gideon Welles, 13 September 1861, *ORN*, I, 6, pp. 110-111.

[64]*Wilmington Journal*, 2 May 1861, col.6, p. 3.

[65] William Schouler to WIlliam H. Seward, 26 August 1861, *ORN*, I, 6, p. 165; William H. Seward to Gideon Welles, 29 August 1861, *ORN*, I, 6, p. 165-166.

[66] *Wilmington Journal*, 9 September 1861, p. 4, col.6.

[67] *William H. Northrup*, Cargo Manifest, *ORN*, I, 6, p. 489.

[68] *Wilmington Journal*, 9 September 1861, p. 4, col. 6.

[69] Browne to L. M. Goldsborough, 25 December 1861, *ORN*, I, 6, pp. 487-488.

The North Carolina built schooner *Wingan* was sold and transferred to British registry at Charleston, South Carolina on 10 July 1861. Under the ownership of Nehmiah K. Clements of Yarmouth, Nova Scotia and renamed the *Albion*, the vessel made a trip to Cuba in July. The following month the *Albion* cleared Cardenas, Cuba for Nova Scotia but, it was the opinion of Flag-Officer G. J. Pendergrast that the vessel was headed for Wilmington when it was captured off Charleston on 19 August. Pendergrast informed Flag-Officer Silas H. Stringham that:

> ...the British consul for North and South Carolina is countenancing the transfer of American vessels and issuing provisional certificates of ownership. My opinion is that the business is destined sooner or later to involve the Governments in difficulty, and that the issuing of these certificates is only for the purpose of covering American vessels with the protection of the British flag and by that means avoid the operation of a blockade some extent.[70]

The British schooner *British Queen* loaded 1500 bushels of salt, 23 bags of coffee and ship stores at Nassau, New Providence and cleared for Baltimore late in April 1862. On 1 March 1862, the schooner was captured off the Cape Fear. Her North Carolina master failed to provide satisfactory answers to Commander O. S. Glisson's questions and the captain of the USS *Mount Vernon* sent the *British Queen* to Philadelphia under a prize crew.[71]

On 29 July 1862, the brig *Napier* was captured attempting to run Turks Island salt into Wilmington. The *Napier* had cleared for either Beaufort, N. C. or Beaufort, S. C. in order to perpetuate the hoax that her cargo of salt was intended for Union consumption.[72] The 41-ton sloop *Lizzie* of Nassau was captured off New Inlet by the USS *Cambridge* on 2 August 1862. The *Lizzie* had loaded with salt, a bale of blankets, boxes of sheet tin, boxes of arrowroot, soda ash, and caustic soda in Nassau and cleared for Baltimore. When captured the

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70 G. J. Pendergrast to S. H. Stringham, 19 August 1861, *ORN*, I, 6, p. 89, G. J. Pendergrast to S. H. Stringham, 19 August 1861, *ORN*, I, 6, p. 90.

71 O. S. Glisson to Gideon Welles, 29 July 1862, *ORN*, I, 7, pp. 601-602.

72 O. S. Glisson to L. M. Goldsborough, 1 March 1862, *ORN*, I, 6, p. 675.

captain explained that the vessel was unseaworthy and he had been heading for the coast to discharge his cargo.[73]

The English schooner *Revere* of Yarmouth, Nova Scotia cleared Nassau, New Providence in September 1862 with a cargo of 800 sacks of salt, 100 barrels of pork, 39 cases of damaged leather trappings, 1 damaged lot of harness, 34 cases of brooms, 13 cases of matches and 1 barrel of beef. The schooner had cleared for Baltimore but was captured by the USS *Monticello* off Cape Fear headed for Wilmington. The cargo was shipped by Henry Adderly and Company, a party "well known to be interested in running the blockade."[74]

The 200-ton English brig *Robert Bruce* cleared Hull for Halifax, Nova Scotia also attempted to get into Shallotte Inlet in October 1862. The cargo consisted of 37 bales and 14 cases of woolens, 4 bales of linens, 26 cases of boots and shoes, 20 barrels of drugs, 400 bundles of iron hoops, 225 pigs of iron, 8 hogsheads of ale, 30 casks of bottled port, 186 crates of bottles, 3 crates and 1 hamper of tinware, 60 bags of glue and 42 bags of corks.[75] On 21 November the schooner *Carrie Sandford* arrived at Wilmington with a cargo of 4,500 bushels of salt, 71 barrels of sugar and a quantity of arrowroot. The *Wilmington Journal* speculated that the material would produce a "very large profit" for the owners of the vessel.[76]

Shallow draft schooners were also able to operate out of the small and unblockaded inlets of the North Carolina coast. Shallotte Inlet, approximately 20 miles west of the western entrance to the Cape Fear was frequently employed by blockade running schooners.[77] Lieutenant-Commander D. L. Braine reported that contrabands confirmed that:

> ...a regular and uninterrupted trade is kept between Nassau, New Providence, and Shallotte Inlet, North Carolina, which inlet is about 20 miles to the westward of this place. Schooners are said to

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73 William A. Parker to L. M. Goldsborough, 2 August 1862, *ORN*, I, 6, pp. 612-613, J. M. B. Clitz to W. A. Parker, 2 August 1862, *ORN*, I, 7, p. 613.

74 D. L. Braine to Gideon Welles 11 October 1862, *ORN*, I, 8, pp. 128-129.

75 John M. B. Clitz to Gideon Welles, 22 October 1862, *ORN*, I, 8, p. 142.

76 *Wilmington Journal*, 12 December 1861, p. 42, col. 2 and George Browne to L. M. Goldsborough, 25 December 1861, *ORN*, I, 6, pp. 487-488.

77 G. H. Scott to S. P. Lee, 25 September 1862, *ORN*, I, 8, p. 87.

> arrive here weekly, and, after discharging, take in cotton, turpentine, and rosin, and sail for Nassau with papers purporting that they sailed from the city of Wilmington.[78]

An intercepted letter from Captain A. B. Magruder of the Confederate Bureau of Ordnance and Hydrography dated 27 October 1862, provided specific instructions for using Little River as a safe harbor for blockade runners. Magruder's instructions were for vessels to:

> Run into the mouth of Little River, a small stream of __ feet of water, near the boundary line of North and South Carolina, emptying into the Atlantic about 30 or 40 miles below Cape Fear. It is not down on the charts nor on the coast survey, and its existence even-certainly its harbor and anchorage ground-is hardly known to any Yankee. Communications from a little village or post-office called Little River, about 4 or 6 miles from the mouth, are readily had with the interior by country roads, etc., with Charleston and Wilmington. A pilot can be had at Wilmington to meet and bring in vessels from the coast, and rosin and turpentine in any quantity can be procured for return cargo; also cotton, lumber, etc.[79]

Schooners proved to be very versatile vessels for breaking the blockade. In addition to having the shallow draft required to navigate the shoal waters of southern inlets they were good windward sailors. That quality permitted them to work along the shore. In the shallow waters around False Cape, approximately 20 miles south of Cape Henry, a schooner of about 200 tons was discovered discharging freight into small boats for landing through the surf. On arrival of a Union warship the schooner weighed anchor, proceeded down the coast approximately four miles, reanchored in shallow water outside the surf and resumed discharging her cargo.[80] The schooner *Racer* was captured at anchor between Stump and New Topsail Inlet on 30 October 1862. That vessel was loaded with salt and the crew was apparently also waiting for assistance to unload through the surf.[81]

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78 D. L. Braine to G. H. Scott, 22 September 1862, *ORN*, I, 8, pp. 87-88.
79 A. B. Magruder to S. R. Mallory, 27 October 1862, *ORN*, I, 8, p. 441 and Gideon Welles to S. P. Lee, 15 January 1863, *ORN*, I, 8, p. 440.
80 *New York Times*, 11 November 1863, p. 1, col. 2.
81 J. D. Warren to G. H. Scott, 30 October 1862, *ORN*, I, 8, pp. 175-176.

The 85-ton schooner *Star* of Washington, North Carolina ran through the blockade from North Carolina to Guadeloupe in March 1862. The *Star* carried a cargo of 60,000 shingles, 16,800 staves, 8 barrels of tar and 6 barrels of spirits of turpentine. After disposing of the cargo for almost $1,500, David Gaskell, the master, loaded the schooner with sugar, molasses, coffee and apothecary ingredients and returned to North Carolina. According to Master Gaskell, "the wants of Washington are great and things of immediate necessity are held at enormous prices."[82]

On 12 June 1862 the schooner *Sereta* was burned after being chased into Shallotte Inlet by the USS *Penobscot*.[83] Another schooner, the *Emily of Nassau* was chased ashore on 26 June 1862 off the Western Bar. The *Emily* was entirely loaded with salt and was burned and scuttled by the crew of the *Mount Vernon*.[84]

Apparently the cargoes carried by small schooners and other sailing vessels were more valuable than the ships themselves. On the morning of 6 July 1862 the crew of the USS *Monticello* discovered a schooner ashore near Masonboro Island. The vessel was almost entirely consumed by flames and Lieutenant D. L. Braine reported that:

> Her cargo, I judge, had been landed and taken away, as there was none on the beach or evidences of it in the immediate vicinity. This, sir, confirms the opinion I have long entertained that vessels are run ashore near these small inlets and out of sight of the blockading vessels, where their cargoes are discharged and they are then burned.[85]

By March 1862, vessels like the 184 ton bark *Rosina Claypole* and 510-ton ship *Konigen Augusta* were taking on cargoes for the Confederacy. Consul Morse calculated that it was "not unlikely that all these vessels may land their cargoes at some of the West India ports and run them in upon steamers, rather than incur the risk of running the blockade with sailing vessels."[86] In February, the 200-ton schooner *Industry*, loaded with salt, was abandoned in the vicinity of New Topsail Inlet. *Mary Elizabeth* of Nassau was captured

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82 Vice-Consul H. Thionville to W. H. Seward, 12 March 1862, *ORN*, I, 7, p. 216.
83 J. M. B. Clintz to L. M. Goldsborough, 12 June 1862, *ORN*, I, 7, p. 466.
84 O. S. Glisson to L. M. Goldsborough, 26 June 1862, *ORN*, I, 7, p. 505.
85 D. L. Braine to J. M. B. Clitz, 6 July 1862, *ORN*, I, 7, p. 547.
86 Consul F. H. Morse to W. H. Seward, 12 March 1862, *ORN*, I, 7, p. 217.

running into Western Bar with salt and fruit. The vessel had cleared for Baltimore and had been cleared at sea by the USS *Huntsville*.[87]

Despite the increase in vessel strength associated with the Union blockade in 1863, sailing vessels continued to be used to run into the shallow inlets of the southeast and blockaded Confederate ports. The Charleston built schooner *Pride* was intercepted heading for Little River or Shallotte Inlet in January 1863. The *Pride* was carrying 175 sacks of salt, shoes and medicine. The master, Thomas Phillips, had cleared New Providence, Nassau for Baltimore.[88] The schooner *Time*, also from Nassau, was caught off New Inlet with a cargo of soda, matches and shoes that same month.[89] The following month the 200 ton schooner *Industry* was abandoned off New Topsail Inlet with a cargo of salt and another schooner was lost on the bar at New Inlet.[90]

By January 1863, vessel traffic through the shallow inlets of the North Carolina coast was sufficient to induce Flag Officer S. P. Lee to caution Captain B. F. Sands, Senior Officer off Wilmington, to:

> Pay attention to the southern limit of this blockade. I have possession of intercepted information that the enemy make use of Little River, near the boundary line of North and South Carolina. Send a smart steamer there commanded by a reliable officer, say the *Chocura*. The rebels next to the Cape Fear entrance refer to their correspondents to the inlets on the coast north and south of these entrances. Of course, Western Bar and New Inlet are the points upon which they will concentrate if they are preparing, as we are advised, to force the blockade. Keep your best armed vessels at these points; a small, active steamer or two on the coast above and below, with a good, long-ranged gun, aided by the schooners, can guard against and perhaps catch those making the coast, either to run up it or down it at night or to enter the inlets Lockwood's Folly, Shallotte, Tubb's and Little River, on the south coast, and Masonboro, New Topsail, New River, etc., on the north coast.[91]

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87 J. F. Armstrong to G. Welles, 24 August 1863, *ORN*, I, 7, p. 459.
88 W. T. Truxtun to S. P. Lee, 21 January 1862, *ORN*, I, 7, p. 459.
89 W. A. Parker to S. P. Lee, 24 January 1863, *ORN*, I, 8, p. 471.
90 J. Trathen to S. P. Lee, 3 February 1863, *ORN*, I, 8, p. 499 and A. L. Case to S. P. Lee, 24 January 1863, *ORN*, I, 8, p. 547.
91 S. P. Lee to B. F. Sands, 17 January 1863, *ORN*, I, 8, p. 448.

In February 1863 the Nassau schooner *Annie*, loaded with salt and a box of drugs, was chased ashore near Little River.[92]

"Thick" weather also provided opportunities for sailing vessels to break the blockade. In March 1863, a schooner took advantage of a northeast gale to run through New Inlet at daybreak. Low visibility permitted the vessel to run through the blockade and into the inlet before being observed.[93] Later in March, the schooner *Sue* from Nassau, "an old offender" was captured off Little River. *Sue* had cleared for Beaufort, North Carolina with a cargo of 800 sacks of salt, twenty-five boxes of pipes, 14 cases and 5 bales of list goods, 4 bales and 1 package of leather, 25 boxes of soap, 10 boxes of tin, 2 half chests of tea, 1 box of tea, 2 boxes of gin, 1 unidentified barrel and 800 sacks of salt. The crew of *Sue* had apparently unloaded 550 sacks of salt through the surf and had it not been for bad weather, would have completed putting the cargo ashore.[94] At dawn on 15 April 1863, the schooner *Odd Fellow* was discovered near Little River Inlet. The *Odd Fellow* had cleared North Carolina through Lockwoods Folly Inlet with a cargo of 82 barrels of spirits of turpentine and 8 barrels of rosin and was underway for Nassau.[95] Early on the morning of 22 April, the schooner *St. George* was discovered heading into New Inlet. The *St. George* departed St. Georges, Bermuda with a cargo of salt, rum and general merchandise and the captain reported that his vessel was headed for Baltimore.[96]

The schooner *Wanderer* from Nassau cleared for Beaufort in April 1863 and was captured off Murrells Inlet, South Carolina on 2 May by the USS *Sacramento*. The *Wanderer* was transporting a cargo of salt and herring.[97] The following day the schooner *Alma* was captured off New Topsail Inlet after clearing Bermuda for Beaufort. The *Alma* was loaded with 1,400 bushels of salt and a lot of liquor.[98] The sloop *Express* from Nassau was also loaded with salt and headed for Wilmington when captured. One of the crew had previously been captured on a schooner headed for Wilmington.[99]

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92 J. F. Armstrong to Judge of the U. S. District Court, Eastern District of New York, 25 February 1863, *ORN*, I, 8, p. 569.
93 A. L. Case to S. P. Lee, 19 March 1863, *ORN*, I, 8, pp. 615-616.
94 D. L. Braine to C. S. Boggs, 30 March 1863, *ORN*, I, 8, p. 637.
95 Report of D. L. Braine, 15 April 1863, *ORN*, I, 8, pp. 807-808.
96 J. Trathen to Gideon Welles, 22 April 1863, *ORN*, I, 8, pp. 817-818.
97 C. S. Boggs to S. P. Lee, 2 May 1863, *ORN*, I, 8, pp. 837-838.
98 W. D. Urann to S. P. Lee, 3 May 1863, *ORN*, I, 8, p. 637.
99 W. T. Truxtun to S. P. Lee, 4 May 1863, *ORN*, I, 8, p. 841.

On 22 April 1864, the USS *Monticello* discovered the schooner *Douglass* of Nassau abandoned and drifting off the Cape Fear.[100] On 13 November 1863, the schooner *Alice Webb* of New York was discovered "discharged, scuttled, and abandoned" in the breakers by the USS *Mount Vernon.*[101] The officers and crew of the USS *Mount Vernon* also discovered the schooner *G. O. Bigelow* near Bear Inlet on 16 December 1863. The schooner was run ashore upon being discovered and the crew escaped in the ship's boat. A prize crew from the USS *Mount Vernon* discovered that the schooner was empty but dunage had apparently been prepared for a cargo of cotton to be loaded.[102]

The USS *Iosco* captured the Nassau schooner *Sybil* off the Cape Fear with a cargo of cotton. Although the vessel's papers were not in order, the *Sybil* was reported to have sailed from Matamoras, Mexico and was enroute to New York. There was no evidence of having cleared that Mexican port and evidence suggested the outward cargo from New York might have been contraband was enough to prompt Commander John Guest to seize the schooner.[103]

Although sailing vessels, and particularly schooners, outnumbered steamers by more than ten to one in 1861, their numbers steadily declined. By 1862, the ratio had dropped to three sail to one steamer and when the number of steamers on the blockade began to increase dramatically in 1863 that ratio dropped sharply. During 1863, only 55 sail were engaged in blockade running while the number of steamers had increased to 73 vessels. By 1864, steamers outnumbered vessels powered by sail seven to one. In spite of that decline and the increased risks, in September 1864, Thomas Kirkpatrick, the United States Consul at Nassau, New Providence reported that a company was being organized to purchase and equip sailing vessels to run the blockade to and from the Bahamas to the coast of Florida. Kirkpatrick related that the organizers of the company felt that schooners were less suspicious than steamers and a better risk.[104] That sentiment was not widely shared and steam vessels rapidly became the standard for successful operations.

By the summer of 1861, one of the most well established and powerful mercantile firms in the Confederacy and several firms in Great Britain were

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[100]Log of the USS *Monticello*, 22 April 1864, *ORN*, I, 9, pp. 777.
[101]Log of the USS *Mount Vernon*, 13 November 1863, *ORN*, I, 9, pp. 780.
[102] *Ibid.*
[103] J. Guest to Gideon Welles, 21 November 1864, *ORN*, I, 11, p. 80.
[104]T. Kirkpatrick to W. Seward, 24 September 1864, *ORN*, I, 10, pp. 477.

turning their attention from sailing vessels to steam ships for running material through the Union blockade. The first firm to employ steamers in running the blockade was John Fraser and Company of Charleston, South Carolina. John Fraser and Company and their Liverpool subsidiary Fraser, Trenholm and Company were the most extensively engaged in Anglo-Confederate blockade running. Their personnel and ships provided the Confederacy with invaluable economic and logistical support throughout the war.

By the time South Carolina seceded from the United States, John Fraser and Company had become one of the largest importing and exporting companies in the South. Although established by John Fraser earlier in the nineteenth century, the firm had been owned and operated by George A. Trenholm since 1853. In addition to the Charleston enterprise, George Trenholm also opened offices in Liverpool and New York. When South Carolina seceded from the Union the firm was operating five ships on routes that connected those offices.[105]

George Trenholm and his partners quickly realized that they were in an excellent position to benefit South Carolina and the Confederacy and to serve the commercial interests of their firms. After South Carolina seceded, and prior to the outbreak of hostilities in April 1861, Trenholm imported arms from Liverpool and New York for sale to the State of South Carolina and later to the Confederate Government.[106] In February 1861, the Spofford and Tileston steamer *Nashville* brought in a shipment of British rifled muskets procured to arm the Vigilant Rifles, a company formed from members of that city's first fire brigade. The weapons had been purchased by the Liverpool office and shipped to New York where they were put aboard the *Nashville* for delivery to Charleston.[107] The *Gondar*, a Fraser, Trenholm and Company vessel, also delivered a heavy caliber Blakely rifled cannon from Liverpool to Charleston to strengthen Confederate works surrounding Fort Sumter.[108]

After the Union declaration of a blockade, George Trenholm decided to transfer several of the company vessels to British ownership. The ships *Alliance* and *Gondar*, for example, were transferred to friends of C. K. Prioleau

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10526 Ethel S. Nepveux, *George Alfred Trenholm and the Company That Went to War*, Comprint, Charleston, South Carolina, pp. 6-7.

106 Wise, *Lifeline of the Confederacy*, pp. 46-47.

107Nepveux, *George Alfred Trenholm*, pp. 22-23.

108 *Ibid.*

and two of the Liverpool office's company clerks. Following that "change of ownership" the vessels were issued certificates of British Registry in July 1861.[109] Shortly thereafter becoming a neutral vessel, the *Gondar* departed Liverpool for Nassau and the *Alliance* sailed for St. Johns, New Brunswick.[110]

Both vessels loaded cargoes that included military supplies and cleared with southern pilots.[111] The *Alliance* arrived at Beaufort, North Carolina during the first week of September 1861.[112] *Gondar* followed the next week. The *Alliance* was the first "British-owned" vessel to test the Union blockade in North Carolina. Reveling in the *Alliance*'s success, the *Wilmington Journal* reported that:

> This is the first instance, we believe, of the ingress of a vessel of a neutral power into our blockaded ports; and as such is entirely sufficient to furnish the occasion for freeing the neutral trade of the British Government from further restrictions.[113]

In analyzing the significance of the arrival of the Fraser, Trenholm and Company vessel, the *Wilmington Journal* editorial continued:

> When, however, as in the case of the *Alliance*, the vessel of a neutral power itself runs the blockade, through either the inefficiency or the remissness [sic] of the cruisers, or even though some accident unaccounted for, there is no doubt that in the common estimation of international law, the blockade is positively and permanently broken.
>
> The test of the blockade for England, so far as her own rights are involved, is positively determined; and the circumstances attending the adventure of the *Alliance* point to prompt and effective measures for the assertion of those rights. It is known that a number of British war vessels are now stationed immediately on the North Carolina coast, and that the running of the blockade by a British merchantman at Beaufort was performed in sight of one of them. The late additions to and concentration of

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109 H. Wilding to C. F. Adams, 8 July 1861, *ORN*, I, 16, p. 604.

110 *Ibid.*. and C. Whitaker to W. H. Seward, 9 August 1861, *ORN*, I, 6, p. 97.

111 C. Whitaker to W. H. Seward, 9 August 1861, *ORN*, I, 6, p. 97, Gideon Welles to S. H. Stringham, 16 August 1861, *ORN*, I, 6, p. 88 and J. S. Keys to G. Welles, 21 September 1861, *ORN*, I, 6, pp. 258-259.

112 *Wilmington Journal*, 5 September 1861, p. 2, col. 5 and C. Stoddard to W. H. Seward, 5 September 1861, *ORN*, I, 6, p. 202.

113 *Wilmington Journal*, 5 September 1861, p. 2, col. 5.

> the British squadron, or rather fleet, off the Southern coast, means something. There has never before been such a formidable array of modern war vessels around and about our coasts.[114]

While the British Government did not attach the desired significance to the *Alliance*'s uncontested arrival at Beaufort, profits realized by Fraser, Trenholm and Company confirmed George Trenholm's confidence in the Confederate market. The cargo of the *Alliance* consisted of an assortment of "general articles and some cases of arms, perhaps it consists of 190,000 percussion caps, large quantities of medicines, quicksilver, pig iron, sheet iron, tin plate, several thousand dozen of spool cotton, &c., &c."[115] The cargoes of the *Alliance* and *Gondar* were offered to the government. Unfortunately for Fraser, Trenholm and Company, the *Alliance* and *Gondar* became victims of the cotton embargo. Both vessels remained in port at Beaufort awaiting cargoes until Fort Macon surrendered and they were captured along with the valuable harbor that provided the United States Navy with a base of operations for the blockade.

The potential of a permanent association with the Confederate Government and the necessity for operating steam powered blockade runners was not lost on Trenholm and his partners. They moved quickly to obtain steamers to run the blockade and offered the services of their Charleston and Liverpool branches to the Confederacy. For a nominal 1.5% commission, Trenholm agreed to accept specie and bonds in Charleston and provide Confederate agents in Europe with an equal amount of cash and credit to support their procurement activities.[116]

To support their agreement with the Confederate States, Charles K. Prioleau of Fraser, Trenholm and Company in Liverpool negotiated the purchase of five steamers. The *Victoria* and *Adelaide* were large screw steamers that had been built during the 1850s for the Australian trade and were in need of immediate repair before being put into service.[117] The screw steamers *Bermuda* and *Bahama* were also purchased, however unlike the *Victoria* and *Adelaide* they were new ships still on the stocks. Both were

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114 *Ibid.*

115 *Ibid.*, and C. Whitaker to W. H. Seward, 9 August 1861, *ORN*, I, 6, pp. 97-98.

116 Wise, *Lifeline*, pp. 46-47.

117 F. H. Morse to W. H. Seward, 9 August 1861, *ORN*, I, 6, pp. 164-165.

under construction in Stockton-on-Tees at the yard of Pearse and Lockwood. The fifth vessel, named *Southerner*, was contracted for with Pearse and Lockwood but was not launched until 1863.[118]

The association with Alfred Trenholm and his partners proved to be one, if not the most important foreign affiliations of the Confederate States of America. When Captain James Dunwoody Bullock and Captain Caleb Huse were dispatched to Great Britain to obtain ships and war materials for the Confederacy, their enterprises were supported by Fraser, Trenholm and Company in Liverpool.[119] That relationship also produced the first test of the blockade by a neutral steamer. During the summer of 1861, supplies obtained by Huse and Major Edward C. Anderson, another Confederate procurement agent, were loaded aboard the Fraser, Trenholm and Company steamer *Bermuda*. The *Bermuda* was a large new screw steamer purchased specifically to run the blockade.

Bermuda was launched on 1 August 1861 and was dispatched immediately to run the blockade. The U. S. Consul in Liverpool described the *Bermuda* as a:

> Two-masted; brig-rigged; funnel, lower part black, upper part red; black hull with a narrow red stripe round the molding, level with the deck; no poop; wheelhouse white. Her bottom pink, up to the waterline; no figurehead; no bowsprit; armed with four guns; has six white boats slung in iron davits...[120]

In addition to supplies and war materials obtained by Huse and Anderson, the *Bermuda* was loaded with shoes, blankets, drugs and dry goods owned by Fraser, Trenholm and Company and 200 short Enfield rifles, 20,000 Enfield cartridges and two 6 pdr rifled field pieces shipped on the account of Wade Hampton.[121] In spite of warnings from the United States Consul in Liverpool, the *Bermuda* arrived safely in Savannah, Georgia on 18 September 1861. After

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118 *The Artizan*, 1 July 1863, p. 165.

119 Nepveux, *George Alfred Trenholm*, pp. 26-27, S. R. Mallory to J. Bulloch, 9 May 1861, *ORN*, II, 2, pp. 64-65, Bulloch, *The Secret Service of the Confederate States in Europe*, 2 Vols., G. P. Putnam's Sons, New York, 1884, Vol. I, pp. 48-50 and Caleb Huse, "The Supplies for the Confederate Army, How they were obtained in Europe and how paid for." Personal Reminiscences an Unpublished History. Boston R. T. Marvin, 1904, pp. 6-15.

120 Wilding to Seward, 16 August 1861, *ORN*, I, 6, pp. 169-170.

121 H. Wilding to F. W. Seward, 3 August 1861, *ORN*, I, 6, pp.100-101 and Liverpool Consul, Reel 19, 13 and 19 August, 1861.

unloading the cargo the vessel was packed with approximately 2,000 bales of cotton. On 29 October 1861, *Bermuda* cleared Savannah and returned to Liverpool without interference.[122]

John Fraser and Company also chartered and operated the steamer *Gordon* in conjunction with the Confederate Government during the fall of 1861. Early on the morning of 12 October 1861, Captain Thomas Lockwood ran the *Theodora* out of Charleston and into Nassau. On board were Confederate commissioners Mason and Slidell, their aides, Slidell's family and Captain Louis Michael Coxetter, hired by Fraser Trenholm and Company to bring a new blockade runner back from England. After delivering Mason, Slidell and Coxetter to Cuba, Lockwood loaded the *Theodora* with swords, pistols, lead, coffee and cigars. Lockwood ran the *Theodora* up the coast of Florida and through the Georgia and South Carolina coastal waterways to Charleston.[123]

On 5 December, *Theodora* departed again for Nassau with a cargo of cotton and Louis C. Heyliger, Confederate Consul for Nassau, on board. After surviving a violent northeast gale, Captain Lockwood delivered Heyliger and loaded a cargo of coffee, sugar and West Indian fruit. On 17 December the *Theodora* cleared Nassau and headed back to Charleston but, because that South Carolina port was closely blockaded, Lockwood headed the steamer to Wilmington. There on the morning of 20 December 1861, Captain Lockwood ran the *Theodora* through the blockade under fire from the USS *Mount Vernon*.[124] The *Mount Vernon*'s shot fell short and *Theodora* became the first steamer through the blockade at Wilmington. As he crossed the bar Lockwood jauntily "returned the salute by giving the Abe-ites three blows of his whistle and dipping his flag."[125]

The success Captain Lockwood registered with the *Theodora* and the lucrative nature of blockade running convinced Trenholm and his partners in Charleston to invest in several additional steamers. In November 1861, the company purchased the *Isabel*, *Cecil* and *Carolina*. All three of the steamers had been designed and employed in the coastal trade. All three were in

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122 Liverpool Consul, Reel 19, 6 December 1861.
123 Wise, *Lifeline*, p. 57.
124 O. S. Glisson to L. M. Goldsborough, 20 December 1861, *ORN*, I, 6, pp. 483-484 and O. S. Glisson to L. M. Goldsborough, 10 January 1862, *ORN*, I, 6, p. 511.
125 *Wilmington Journal*, 26 December 1861, p. 2, col. 1.

Charleston when the blockade became reality and their owners put them up for sale rather than assume the risks associated with running the blockade.

The *Cecil* was a 156-foot side-wheel steamer built by Harland and Hollingsworth of Wilmington, Delaware in 1857. Since 1858, the vessel had been owned and operated by the Florida Steam Packet Company running between Charleston, Savannah and Jacksonville, Florida.[126] The *Carolina* was a 165-foot side-wheel steamer built by Samuel Sneden of Greenpoint, New York. Like the *Cecil*, the *Carolina* was engaged in the coastal trade prior to establishment of the blockade.[127] The third vessel, *Isabel*, was the largest of the three steamers. That 220-foot side-wheel steamer had been built in 1848 by S. H. Duncan in Baltimore. The *Isabel* had provided passenger and freight service between Charleston and New York prior to the attack on Fort Sumter.[128]

Of the three vessels, only the *Isabel* was ready for sea. On 5 December 1861, the steamer cleared Charleston as the *Ella Warley* and headed for Nassau with almost a thousand bales of cotton.[129] At Nassau the *Ella Warley* was transferred to British ownership and registry with the assistance of H. Adderly and Company. After the cargo of war materials from the Fraser, Trenholm and Company ship *Eliza Bonsall* was exchanged for *Ella Warley*'s cotton, the steamer returned to Charleston on 2 January 1862.[130]

Because Trenholm and his partners charged rates commensurate with the risks involved in blockade running, Confederate agent Caleb Huse also entered into another agreement to ship supplies through the blockade that would ultimately lead to the operation of government owned vessels. Huse negotiated an arrangement with T. O. Stock and a group of English merchants to purchase the steamer *Gladiator* and run the vessel through the blockade with a cargo consigned by the Confederate purchasing agent.[131] Like *Bermuda* and *Bahama*, the *Gladiator* had been built at Stockton-on-Tees by Pearse and

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126 Edward A. Mueller, *St. Johns River Steamboats*, Jacksonville, Florida, 1986, p. 193.

127 *Ibid.*, and Nepveux, *George Alfred Trenholm*, p. 39.

128 William M. Lytle and Forrest R. Holdcamper, *Merchant Steam Vessels of the United States, 1790-1868*, Steamship Historical Society of America, Inc., Staten Island, NY, 1975, p. 103 and Nepveux, *George Alfred Trenholm*, p. 38.

129 *Nassau Guardian*, 12 April 1862 and Correspondence of the Confederate Treasury Department, Reel 2, p. 451, NA.

130 L. Heyliger to J. P. Benjamin, 27 December 1861, *ORA*, IV, 1, pp. 815-816, J. Fraser & Company to J. P. Benjamin, 30 December 1861, *ORA*, IV, 1, pp. 819 and Wise, *Lifeline*, pp. 94-98.

131 D. T. Bisbie to J. P. Benjamin, 16 December 1861, *ORA*, IV, 1, pp. 800-802 and C. J. Helm to L. Heyliger, 20 December 1861, *ORA*, IV, 1, pp. 816-818.

Company and launched in 1860.[132] F. H. Morse, U. S. Consul in London, described the *Gladiator* as an:

> ...iron screw boat, with a round stern, flush deck, upright stem, no figure or billet head, bottom painted copper colored, black from water to rail. She has three masts, with three yards on the foremast; smoke pipe between the fore and main masts.[133]

Stock and his associates would purchase the steamer and provide Huse with 500 tons of cargo space at £8 per ton for the inbound voyage. Huse would also pay a 5% primage and provide insurance for the voyage. The remaining cargo space was for Stock and his associates. Upon arrival in a Confederate port the owners of the *Gladiator* could offer the vessel to the Confederacy at £18,000. If the Confederacy did not purchase the vessel, the owners could sell it on the open market. If no one purchased the vessel, the Confederate government was obligated to pay Stock and his associates £15,000 for the steamer.[134] This arrangement was precluded when newly appointed Confederate special agent Louis C. Heyliger was forced to purchase the *Gladiator* to prevent the captain from breaking the ship's contract and returning the vessel and cargo to England.[135]

Once under Confederate control the *Gladiator* took on coal and Heyliger secured the services of Captain Robert Lockwood to act as pilot. However, before the *Gladiator* could clear Nassau the USS *Flambeau* arrived in port. Both Captain G. G. Bird and Heyliger agreed that it would be very imprudent to attempt to escape Nassau with the faster *Flambeau* waiting for the *Gladiator* to sail.[136] Because of the *Gladiator*'s size and lack of speed the decision was made not to attempt to run the blockade. The impasse was resolved when an agreement was reached with Fraser, Trenholm and Company to provide space for the *Gladiator*'s cargo on smaller and faster steamers that John Fraser and Company had recently purchased.[137]

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132 Wise, *Lifeline*, p. 570.

133 Morse to Seward, 2 November 1861, *ORN*, I, 6, p. 444.

134 C. Huse and T. A. Stock Memorandum, 24 October 1861, *ORA*, IV, 1, pp. 817-818.

135 *Ibid.*

136 W. D. Hoyt to J. Fraser & Company, 20 December 1861, *ORA*, IV, 1, pp. 810-811.

137 Confederate Treasury Correspondance, Reel 2, pp. 449-453, C. Huse and T. A. Stock Memorandum, 24 October 1861 and *ORA*, IV, 1, pp. 818-819 and W. D. Hoyt to J. Fraser & Company, 20 December 1861, *ORN*, I, 12, pp. 838-839.

Rather than run the vessels in through Charleston, now closely blockaded, or Savannah, nearly closed by the capture of Tybee Island, Fraser, Trenholm and Company suggested that their steamers run the cargo into Mosquito Inlet near New Smyrna, Florida. While waiting to see if the services of John N. Maffitt could be obtained to captain one of the steamers, Captain Thomas Lockwood took the coastal steamer *Carolina*, renamed *Kate*, to Nassau. There Lockwood loaded 300 cases of Enfield rifles, 32 bales of blankets, 4 cases of surgical instruments, 94 boxes of mess tins, 15 cases of medicine, 1 barrel of medicine, 500 barrels of gunpowder, 514 boxes of cartridges, and 90 boxes of percussion caps aboard the *Kate*.[138]

Lockwood cleared for St. Johns, New Brunswick and ran the *Kate* into Mosquito Inlet where the cargo was quickly discharged. With a load of cotton onboard, Lockwood returned to Nassau for more of the *Gladiator*'s cargo. There *Kate* rendezvoused with the Fraser, Trenholm and Company steamer *Cecile*, under the command of Captain Ferdinand Peck and carrying John Maffitt. Maffitt supervised loading the remainder of the *Gladiator*'s cargo aboard the *Kate* and *Cecile*. Both vessels had delivered their consignments by mid-March and returned to Nassau with cotton.[139] Because the *Gladiator* was considered unsuited for transporting cargoes through the blockade the vessel was sold to Fraser, Trenholm and Company for transporting cotton to England.

Although the first voyage of the *Bermuda* and shipping the *Gladiator*'s cargo into Florida on the *Kate* and *Cecile* proved to be successful for both Fraser, Trenholm and Company and the Confederacy, the cost of shipping goods with private firms was considered excessive by Confederate agents in Europe. Both Edward C. Anderson and James D. Bullock felt that they should find additional means of shipping their munitions and supplies into the Confederacy. Working through British agents Andrew and Thomas Byrne, they located and ultimately purchased the screw steamer *Fingal*.[140] The screw steamer *Fingal* had been built by T and J. Thomson in Govan, Scotland in 1861 for service along the Scottish coast.[141]

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138 Bahamas Consul, Reel 10, 19 January 1862; *Nassau Guardian*, 12 April 1862 and L. Heyliger to J. P. Benjamin, 30 January 1862, *ORA*, IV, 1, pp. 895-896.

139 Correspondence of the *New York Times*, 15 February 1862, *ORN*, I, 12, pp. 628-630.

140 Bulloch, *Secret Service*, Vol. 1, pp. 109-118.

141 Certificate of British Registry, Fingal, PRO, Kew Gardens.

When the *Fingal* cleared Greenock in October 1861, the vessel carried over 11,000 rifles, 24,000 pounds of gunpowder, 233,000 cartridges, over 1,000,000 percussion caps, 500 swords, two 4.5-inch Blakely cannon, two field pieces, blankets, clothing, drugs and shot and shell for the cannon.[142] During the first week of November the *Fingal* reached Bermuda. There the vessel cleared Bermuda Customs on 4 November and secured a Georgia coastal pilot from the steamer CSS *Nashville*. On 7 November the vessel departed St. Georges for Savannah.[143] Although sighted by a United States steamer off Tybee Island, the *Fingal* entered the Savannah River and, after running aground under the guns of Fort Pulaski, delivered her cargo at Savannah.[144] The *Fingal*, like the *Gladiator* was considered to be too large and slow a vessel to run the blockade and once Savannah was effectively closed the ship was trapped. Ultimately, the hull and machinery of the ship were used as a platform for construction of the ironclad CSS *Atlanta*.[145]

The success registered principally by the John Fraser and Fraser, Trenholm and Company vessels and increasing demands for both war material and commercial merchandise in the South provided the impetus for dramatically increased blockade running in 1862. With the exception of Charleston, the blockade was still weak, if not nonexistent due to the lack of United States warships and the logistical system necessary to keep them on stations off Confederate ports. The partners of John Fraser and Fraser, Trenholm and Company were already convinced of the potential profits and nominal risks associated with trading through the blockade. Insurance, although increasing in cost, was available for vessels engaged in running the blockade and risks were nowhere near as high as potential profits.

By February 1862, John Fraser and Fraser, Trenholm and Company were consolidating their position as the dominant force in a rapidly developing

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142 Wise, *Lifeline*, p. 84; G. Welles to L. M. Goldsborough, 24 October 1861, *ORN*, I, 6, pp. 355-356 and Bulloch, *Secret Service*, Vol. 1, pp. 109-110.

143 Consular Dispatches from Bermuda, State Department Records, NA, Reel 5 and 3 November 1861 and *Bermuda Royal Gazette*, 8 November 1861.

144 Stanley W. Hoole, *Four Years in the Confederate Navy: The Career of Captain John Low on the CSS Fingal, Florida, Alabama, Tuscaloosa, & Ajax.* Athens, University of Georgia Press, 1964, pp. 1-15; Bulloch, *Secret Service*, Vol. I, pp. 114-118 and Thomas R. Neblett, Edward C. Anderson and the *Fingal*," *Georgia Historical Quarterly*, LII, June 1968, pp. 132-158 and Wise, *Lifeline*, pp. 85-87.

145 Thomas J. Scharf, *History of the Confederate Navy*, 2 Vols., Rogers and Sherwood, New york, 1887, pp. 638-645.

pattern of Anglo-Confederate commerce. Their steamer *Bermuda* was again in Liverpool and United States Consul, Thomas H. Dudley, reported that the vessel was being loaded as rapidly as possible with a cargo of 525 cases of shells, seven rifled cannon, 18 carriages, nineteen cases of small arms, several "heavy' cases of unknown contents, ten tons of telegraphic wire and 156 tons of saltpeter provided by Faucett, Preston & Company.[146] Dudley reported in February that the *Bermuda* was to take the cargo to Bermuda where it would be divided between the steamers *Caroline* and *Herald* for the run through the blockade at Savannah or Charleston. Trenholm's firms had not failed to observe the significance of using small fast vessels rather than larger oceanic steamers to run goods through the blockade. Fast steamers involved in the British mail and passenger services appeared to be ideal for the task at hand. Perhaps the first to be purchased was the *Herald*.

Purchase of the *Herald* had been effected by the firm of Cunard, Wilson & Company. That steamer had been in the Dublin and Glasgow service and was reported to be extremely fast. Henry B. Hammond, U. S. Consul in Dublin reported that:

> The spirit of brag is already displayed by those citizens of Dublin who have gained the knowledge of the steamer's new errand. They think there is no steamer in our whole Navy that can catch the *Herald*. I hope her valuable qualities will soon be tested by our fleet.[147]

After landing a cargo of war material the *Herald* would return to Bermuda for her share of the *Bermuda*'s cargo. The cargo capacity of the *Bermuda* could be employed to deliver material to Bermuda and the speed of the *Caroline* and *Herald* could be used to take cargoes through the blockade.[148] The pattern of trading between neutral British possessions off the Confederate coast and Confederate ports at Charleston and Wilmington was conceived by the partners of John Fraser and Fraser, Trenholm and Company early in 1862. As the war

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146 T. H. Dudley to W. H. Seward, 22 February 1862, *ORN*, I, 6, pp. 683-684; T. H. Dudley to W. H. Seward, 14 February 1862, *ORN*, I, 7, pp. 88-89 and T. H. Dudley to W. H. Seward, 19 February 1862, *ORN*, I, 7, p. 106.

147 H. Hammond to W. H. Seward, 14 February 1862, *ORN*, I, 7, p. 106.

148 T. H. Dudley to W. H. Seward, 22 February 1862, *ORN*, I, 6, pp. 683-684.

progressed, that strategy would evolve into the most successful formula for blockade running that the war produced.

In addition to the *Bermuda*, John Fraser and Fraser, Trenholm and Company purchased the large steamers *Rangoon, Economist, Gladiator, Leopard,* and *Minho* to be loaded with cargoes for Bermuda and Nassau.[149] On 28 February the *Economist* arrived at Bermuda.[150] By 11 March the *Bahama* was ready to sail from the docks at West Hartlepool with a cargo of shot, gunpowder and munitions.[151] The *Bermuda* arrived on 22 March after a voyage from Liverpool and the*Herald* arrived two days later on 24 March 1862 after a fourteen day trip from Liverpool by way of Madeira. The vessel was consigned to John Tory Bourne, the St. Georges agent for the Confederate Government. According to U. S. Consul C. M. Allen the *Herald* was a "narrow iron vessel of about 600 tons burden, and draws but 9 feet of water, is white below water line, and black above, has one smoke stack and two masts, with yards on the foremast."[152] Although the *Herald* and *Caroline* were to establish a service between Bermuda and Wilmington, the *Herald* ran into Charleston and joined *Kate* in regularly transporting material between Nassau and Charleston. During 1862, the vessels owned by John Fraser and Company and Fraser Trenholm and Company ran almost exclusively between Charleston and Nassau.[153]

Fraser, Trenholm and Company also purchased the steamer *North Carolina* at Wilmington early in 1862. That new screw propeller was one of a number of southern steamships offered for sale as a consequence of the blockade. The vessel had been built by Novelty Iron works in New York in the fall of 1860 and had been launched in January 1861. The 169-foot vessel was 29 feet 2 inches in beam and had a depth of hold of 13 feet 3 inches. The iron hull was double riveted and a 250 horsepower single cylinder engine turned a 12-foot propeller. The *North Carolina* could make 14 miles per hour and consumed only 10 tons of coal every 24 hours. In August 1861, Thomas

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149 T. H. Dudley to W. H. Seward, 22 February 1862, *ORN*, I, 7, p. 212.

150 *Economist*, Bermuda Customs, Inbound St. Georges, 28 February 1861.

151 C. M. Allen to W. H. Seward, 24 March 1862, *ORN*, I, 7, p. 183, and Consular Dispatches, Bermuda, Roll #2.

152 H. Davy to W. H. Seward, 11 March 1862, *ORN*, I, 7, p. 183 and C. M. Allen to W. H. Seward, 24 March 1862, *ORN*, I, 7, p. 212.

153 Wise, *Lifeline*, pp. 251-252.

Walker, Edward Kidder and P. K. Dickinson offered the vessel for sale for the Cape Fear and Ocean Steam Navigation Company.[154]

The *North Carolina* was subsequently purchased by Fraser, Trenholm and Company, renamed the *Annie Childs*, and on 4 February 1862, ran through the blockade at Wilmington with 634 bales of cotton, 788 barrels of rosin, 225 boxes of manufactured tobacco, one box of peanuts and one box of unidentified contents. The *Annie Childs* also brought out of Wilmington some of the officers and midshipmen that would be assigned to the CSS *Florida* as well as Confederate Agent Captain James D. Bulloch. Bulloch was returning to Europe to continue his purchasing operations for the Confederate Government.[155] The *Annie Childs*, also operated between Charleston and Nassau under the names *Julie Usher* and *T. D. Wagner* and was part of the John Fraser and Company fleet until the vessel was sold in May 1863.

Although George Trenholm's companies were the dominant force in early steam blockade running, other firms entered the business in 1862. One of the most prominent was the firm of Zachariah C. Pearson and Company of Hull. The firm was owned by Zachariah C. Pearson, the mayor of Hull and a successful merchant with a fleet of vessels that included the steamers *Circassian, Modern Greece, Stettin, Lodona, Phoebe, Merrimac* and *Peterhoff*. Pearson entered into an agreement with Huse to transport military supplies to the Confederacy. Unlike Fraser, Trenholm and Company, Pearson and his associates found their efforts to run the blockade disastrous. Six of the seven vessels that Pearson and Company dispatched to the South were captured and one, the *Modern Greece*, was run ashore and lost north of New Inlet.

The first Pearson steamer to be dispatched to the Confederacy, *Circassian*, was a large ship-rigged iron screw steamer of 1,387 tons. When the vessel cleared Constantinople on 20 December 1861, the hull was black "with a yellow stripe round the molding, level with the deck" and the chimney was pink with a black top. The stem was decorated with a female figurehead that was painted white.[156] According to the Consul in Constantinople, the *Circassian* had for several years been engaged in trading between Liverpool, Constantinople and Trebizond.[157] Although the captain cleared the *Circassian* for the United

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154 *Wilmington Journal*, 2 August 1861, p. 3, col. 1.
155 F. H. Morse to W. H. Seward, 12 March 1862, *ORN*, I, 7, p. 217.
156 Liverpool Consular Dispatch, 3 January 1862, *ORN*, I, 6, pp. 530-531.
157 Constantinople Consular Dispatch, 25 December 1861, *ORN*, I, 6, p. 532.

States, by 21 February the ship was in Liverpool taking on coal for a voyage to Bermuda.[158] When the *Circassian* was captured by USS *Somerset* on 4 May 1862 approximately 20 miles from Havana, documents that Captain Edward Hunter failed to destroy confirmed that the ship had put into Bordeau. There, according to an agreement between Z. C. Pearson and J. Soubry, Esq., of Paria, the *Circassian* was loaded with a cargo consisting of "about 150 tons of wine and brandy." The remainder of the cargo was "coffee, preserved meats, & etc." and the destination was New Orleans. The vessel and cargo were completely insured against "marine and war risks" by British insurance companies that charged 25% for assuming the risk.[159]

Pearson and Company also dispatched their new screw steamer *Stettin* in March 1862. The *Stettin* arrived in Bermuda from Hull around mid-April in search of coal. While in St. Georges the *Stettin*'s disbursements were handled for Captain Johnson by John T. Bourne. On 23 April 1862, Bourne reported to Zachariah C. Pearson and Company that their steamer had departed for "her port of destination."[160] According to the U. S. Consul in Bermuda, that destination was Tampico, Mexico but, in fact, the ship headed for Nassau to take on coal.[161] On 21 May, the *Stettin* cleared Nassau for St. John's Newfoundland. The vessel was discovered and captured off Cape Romain, South Carolina on 24 May 1862, by the USS *Bienville*.[162] The vessel's cargo consisted of powder, saltpeter, pig lead, iron and tin plates, tea, coffee, brandy, gin, quinine, and other valuable articles that had been insured in England for 16% premium.[163] The vessel owned by Z. C. Pearson & Company was not insured.[164] When captured the *Settin*'s masts were found to have been "stripped of spars and sails, leaving nothing but her lower masts standing" and the hull had been "painted lead color."[165]

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158 Liverpool Consular Dispatch, 26 February 1862, *ORN*, I, 7, p. 107.

159 *New York Times*, 23 June 1862, p. 2, col. 1.

160 J. Bourne to Z. C. Pearson and Company, 23 April 1862, Bourne Letter Books, Book 1 and Frank Vandiver, *Confederate Blockade Running Through Bermuda, 1861-1865;* Letter and Cargo Manifests, University of Texas, Austin, 1947, pp. 16-17.

161 U. S. Consul, 26 April 1862, Dispatch to Secretary of State, Consular Records Bermuda, NA.

162 *Civil War Naval Chronology*, Vol. II, p.66.

163 J. R. M. Mullany to S. F. Du Pont, 24 May 1862, *ORN*, I, 13, pp. 29-30 and *Wilmington Journal*, 28 May 1862, p.2, Col. 5, (reprinted from *Charleston Mercury*, 27 May 1862).

164 *Wilmington Journal*, 28 May 1862, p. 2, col. 5, (reprinted from *Charleston Mercury*, 27 May 1862).

165 J. R. M. Mullany to S. F. Du Pont, 24 May 1862, *ORN*, I, 13, pp. 29-30.

Pearson's iron screw steamer *Modern Greece* was also engaged in the company's Mediterranean trade for almost two years. Like the *Circassian*, the 753 ton *Modern Greece* was withdrawn from her traditional routes to engage in the more lucrative trade with the Confederacy. The *Modern Greece* was a large deep-draft vessel 210 feet in length, 29 feet in beam and drawing 17 feet 2 inches when loaded. After taking on coal at Cardiff, the steamer cleared for Gibraltar on 19 February and sailed to Liverpool to take on a cargo of arms and military supplies for Fraser, Trenholm and Company. The vessel took on a civilian cargo of "wine, spirits, tea and necessaries" at Hull before clearing for Falmouth. The *Modern Greece* cleared Falmouth for Tampico on 2 May and steamed for Wilmington by way of Madeira.[166]

On 27 June 1862, the *Modern Greece* attempted to enter New Inlet but was driven ashore by the USS *Cambridge* and USS *Stars and Stripes*. Fortunately the vessel was under the covering fire of the guns of Fort Fisher when finally aground. Major Hendrick, commander of Fort Fisher, quickly brought his artillery to bear on the USS *Cambridge* and USS *Stars and Stripes*, thus preventing their destruction of the steamer. Both the crew and passengers aboard the *Modern Greece* made it safely to shore. A salvage party under the direction of Colonel Leaventhorp landed a large quantity of the steamer's cargo including ordnance, arms and ammunition and a variety of commercial freight.[167] The entire non-military cargo was subsequently auctioned off in Wilmington on 8 July and the "HULL, SPARS, RIGGING, ANCHORS AND CHAINS" of the vessel were auctioned on the beach at Fort Fisher at noon on 30 July 1862.[168] For Z. C. Pearson and Company the *Modern Greece* was not a total loss. Both the vessel and cargo were insured at 25% premium by Lloyds and recovery of a portion of the "wines and spirits" carried as cargo could generate an anticipated 1200% profit.[169] Although the vessel became a total loss, Confederate salvage of the *Modern Greece* 's cargo confirmed the lessons learned in bringing cargoes through the surf from schooners. Under the protection of shore batteries, valuable cargoes could be recovered.

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166 *Liverpool Daily Post*, 29 July 1862 included in Consular Dispatches, Liverpool, *ORN*, I, 8, pp. 107 and 372.

167 *Wilmington Journal*, 27 June 1862, p. 2, col. 1 and 28 June 1862, p.2, col. 2.

168 *Wilmington Journal*, 1 July 1862, p. 2, col. 5 and 29 July 1862, p.3, col. 3.

169 *Liverpool Daily Post*, 29 July 1862 included in Consular Dispatches, Liverpool.

On 3 June 1862, the U. S. Consul in Falmouth reported that the Pearson steamer *Lodona* had arrived at that port from Hull. The *Lodona* was a bark rigged screw steamer of 573 tons burden with one black funnel between the main and mizzen masts. The lower part of the hull was painted brown and the bulwarks were black with a white after rail.[170] Under the command of Captain Luckie the *Lodona* was to take in a supply of coal and sail for Tampico, although the vessel had received a license from the U. S. Consul in Hull to put into Port Royal, South Carolina.

After crossing the Atlantic, *Lodona* put into Bermuda for coal on 29 June. Finding none available, the vessel took on a supply of wood from a wrecked vessel to use as fuel and sailed for Nassau on 16 July.[171] There sufficient coal was obtained to permit the *Lodona* to attempt to run into a Confederate port. On 3 August, the *Lodona* appeared off Savannah and, had it not been for a well-placed shot from a Union battery on Tybee Island and shallow water on the bar, would have run into the Savannah River. The following day Captain Luckie ran the steamer into Ossebaw Sound. Before being able to enter the Ogeechee or Vernon River southeast of Savannah, the *Lodona* was captured by the USS *Unadilla*. The cargo proved to be "Brandies of the best brands, cooling claret, genuine gin with Holland labels, dry goods and gentlemen's ready-made garments, boots and shoes with one item of 3,000 ounces of quinine...."[172]

Pearson also shipped a cargo of brandy, rum, wine, 12,000 small arms and four cannon in the steamer *Phoebe* in June 1862. Like the *Modern Greece* and the *Circassian*, *Phoebe* was a large iron screw steamer. The vessel had been built in Dumbarton in 1851, and was fitted with a single cylinder steam engine of 120 horsepower.[173] Before departing the *Phoebe* was also loaded with 16 casks of tobacco and 100 packages of slops, consisting of serge for clothing for soldiers, sailors, and marines" at Bermuda and more than 1,500 barrels of cannon powder.[174] The *Phoebe* arrived in Bermuda and was reported to be discharging her cargo of powder on 19 August.[175] While in Bermuda the

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170 Alfred Fox to W. Seward, 3 June 1862, *ORN*, I, 7, p. 520.
171 American Consular Records, *Bermuda Historical Quarterly*, p. 64.
172 *New York Times*, 15 August 1862, p. 2, col, 4 and *Wilmington, Journal* 7 August 1862, p. 2, col. 3.
173 G. Welles to Flag-Officers, 8 July 1862, *ORN*, I, 7, pp. 553-556.
174 G. Welles to Flag-Officers, 17 July 1862, *ORN*, I, 7, p. 579.
175 C. M. Allen to W. H. Seward, 19 August 1862, *ORN*, I, 7, p. 690.

Phoebe was also painted a light lead color in preparation for running the blockade.[176] Because Pearson's creditors sought legal means for recovering past due accounts, the *Phoebe* was ultimately sold by Overed Guerney and Company of London to the Australian Steam Packet Company to settle accounts and never ran the blockade.[177]

After the crew attempted to take over the ship and had to be was paid off and discharged, the Pearson screw steamer *Merrimac* was also sold at Bermuda. The *Merrimac* arrived in Bermuda on 5 September 1862, and word of Z. C. Pearson and Company's bankruptcy caught and creditors had the ship seized. Being unable to have the *Merrimac*'s cargo discharged due to proceedings against Pearson and Company, Huse negotiated with Pearson and Company creditors to purchase the steamer using £7,000 in Confederate cotton certificates. The decision to purchase the *Merrimac* was made in spite of recommendations of Captain Thomas Lockwood to John Fraser and Company. Lockwood inspected the *Merrimac* while enroute to Liverpool and found that the vessel was "too slight" to be suitable for Fraser, Trenholm and Company's blockade running operations.[178]

Finally in December 1862, the Ordnance Bureau purchased the side-wheel steamer *Merrimac* and in February 1863 the vessel ran into Wilmington under the command of Captain Porter.[179] The *Merrimac* had been owned by the firm of Z. C. Pearson and Company and was previously under contract to carry a cargo of military supplies and ordnance. Upon arrival in a Confederate port the vessel was to be purchased and shipping on the cargo paid. As the vessel proved to be unsuitable, the Ordnance Bureau sold the vessel and the merit of their judgment was confirmed when the *Merrimac* was captured by the USS *Iroquois* while running out of Wilmington on 24 July 1862. According to Captain A. L. Case the *Merrimac* would not have been captured had her machinery been in good order and properly managed.[180]

In spite of insurance coverage the loss of every one of the Pearson steamers drove the firm into bankruptcy by late summer. Z. C. Pearson and

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176 E. F. Devens to S. F. Du Pont 7 September 1862, *ORN*, I, 7, pp. 317-318.

177 J. Bourne to Overed Guerney & Co., 15 January 1863, Bourne Letter Book No. 1, Bermuda Archives and Consular Dispatches, Bermuda, 24 January 1863, NA.

178 Bourne to John Fraser & Company, 11 December 1862, Vandiver, *Blockade Running*, p. 27.

179 J. Bourne to C. Huse, 10 February 1863, Vandiver, *Blockade Running*, p. 39 and US Consular Dispatch, Bermuda, 18 April 1863, RG 84, NA.

180 Report of A. L. Case, USS *Iroquois*, 24 and 27 July 1863, *ORN*, I, 10, pp. 131-133.

Company had accumulated £345,000 of debt in blockade running and creditors resorted to litigation to recover what they could. By September 1862, creditors of Z. C. Pearson had accepted a proposal to pay off bad debts incurred in blockade running. The proposal was for:

> All the bills of the firm not yet due, but accruing, are to be retired, the creditors to receive 10c in the pound immediately, and the payment of the remainder to be dependent to a certain extent on the nature of the remittances from the Confederate States. The amount due to the firm from these States it is said will be sufficient to meet all claims in full, and have a large surplus. A gentleman is already in the South on behalf of Mr. Pearson endeavoring to turn £75,000 worth of Confederate paper money into goods. The steamer *Peterhoff,* which is now trying to run the blockade, belongs to Mr. Pearson. She has on board a cargo valued at $900,000 and, if she gets safely in, the sale of her stores will be a golden harvest for Mr. Pearson's creditors.[181]

Both the *Phoebe* and *Merrimac* were in Bermuda when Pearson's creditors filed injunctions against the company. John Bourne served as agent for the vessels and incurred "considerable expense" as a consequence. Sale of the steamer *Merrimac* was anticipated to generate at least £131,574 and the sale of the cargo and steamer *Peterhoff* was expected to cover all company liabilities.[182]

Fortunately for Pearson and the firm's creditors, the new steamer *Peterhoff* was successful in making one run through the blockade. The *Peterhoff* was a new 669 ton screw steamer built in Sunderland. The vessel was 220 feet in length, 29 feet in beam and had a depth of hold of 16 feet and 9 tenths. Two cylinder engines produced 90 horsepower. Pearson had built the *Peterhoff* for the Baltic trade but contracts with Huse induced the ship owner to commit the vessel to blockade running. Like the *Lodona, Phoebe* and *Merrimac,* the *Peterhoff* arrived in Bermuda late in the summer of 1862. The U. S. Consul in Bermuda reported that the vessel arrived on 30 July and on 2 August the vessel cleared Bermuda Customs at St. Georges.[183] After clearing London for Matamoras, the *Peterhoff* also arrived in Bermuda during the

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181 *Liverpool Daily Post,* 9 September 1862, enclosed in US Consular Dispatch No. 128, 12 September 1862.

182 *Wilmington Journal,* 17 September 1863, p. 4, col. 1.

183 U. S. Consul to Secretary of State, 9 August 1862, NA, Consular Dispatches Bermuda and *Liverpool Daily Post,* 6 September 1862 and St. Georges Customs Records, Inbound 1863.

summer of 1862.[184] The *Liverpool Daily Post* reported that the vessel arrived on 30 July with a cargo of wine, merchandise and an "immense quantity of quinine" worth approximately $900,000.[185] On 9 September 1862, the Liverpool *Daily Post* reported that the sale of the *Peterhoff*'s cargo would be a "golden harvest" for the Z. C. Pearson and Company Creditors.[186]

Unlike the *Merrimac* and *Phoebe*, the *Peterhoff* departed Bermuda for the Confederacy and ran successfully in to Charleston. At Charleston the *Peterhoff*'s cargo was discharged and a load of cotton was taken on for the return voyage. By 21 November the *Peterhoff* had returned to Liverpool, discharged her cargo and was waiting to load.[187] A portion of the cargo was loaded at Liverpool and the *Peterhoff* departed for London. There her new owner, London shipbuilder Joseph Spence, commissioned a survey to identify necessary repairs and put the vessel into the floating dry dock at Victoria Dock. In dry dock the hull was scraped and painted in preparation for a voyage to the Gulf of Mexico.[188]

After coming out of the dry dock the *Peterhoff* was loaded with a cargo of "boots, shoes and clothing, salt petre, machinery mainly casks & cases the contents of which are yet unknown".[189] The *Peterhoff* cleared London for Matamoras and sailed on 9 January 1863.[190] The *Peterhoff* was captured by the USS *Vanderbilt* coming out of St. Thomas in the West Indies on 25 February 1862. Although the *Peterhoff*'s owners entered protests and complained to the British Government, the United States persisted and the vessel was condemned by the Key West Prize Court.[191]

It was not readily apparent early in 1862, but by the end of the year the nature of blockade running was in the first stages of an important transition. As the number of steam vessels on the blockade increased the advantages of operating steam-powered blockade runners had become readily apparent.

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184 C. M. Allen to W. H. Seward, 19 August 1862, *ORN*, I, 6, p. 690.
185 *Liverpool Daily Post*, 6 September 1862, US Consular Dispatches.
186 *Liverpool Daily Post*, 9 September 1862, US Consular Dispatches.
187 Consular Dispatch, Liverpool, 21 November 1862, NA, Consular Dispatches, Reel 10.
188 *Peterhoff*, Report for Repairs and Certificate of British Registry, 20 December 1862, PRO.
189 Consular Dispatches, London, 1 and 2 January 1863, NA, RG 84.
190 Consular Dispatches, London, 10 January 1863, NA, RG 84 and Consular Extracts, London, 11 April 1863, *ORN*, I, 14, pp. 171-172.
191 Stuart L. Bernath, *Squall Across the Atlantic, American Civil War Prize Cases and Diplomacy*, Berkeley, California, 1970.

Experience with the *Gladiator* and *Fingal* provided valuable insight into the evolving mechanics of the nascent trade. At Nassau, Louis Heyliger, with assistance from Henry Adderly, negotiated perhaps the most important concession of all from the British. That was the right to break bulk and reship cargoes through the blockade on smaller faster vessels. In a 27 December 1862, letter to J. P. Benjamin, Heyliger reported that:

> We have succeeded in obtaining a very important modification of the existing laws, viz, the privilege of breaking bulk and transshipment. This, as you are aware, was not previously accorded, so that if matters come to the worst we may make such a division of the cargo into other vessels as will diminish the risk.[192]

That strategy was first conceived by agents of Fraser, Trenholm and Company.

As the intensity of steamer activity between Nassau and Charleston began to attract increasing Union attention, additional and more serious consideration was given to running vessels between Bermuda and Wilmington. In December 1861, the steamers *Ella Warley* and *Theodora* had run into St. Georges from Charleston with cargoes of cotton for John Fraser and Company.[193] In January, February and March 1862, the *Kate*, formerly the *Theodora*, made runs into Bermuda from Charleston before being sold to the Confederate Navy and captured off Wilmington on 28 May 1862. Three other John Fraser and Company Charleston based steamers, *Ella Warley, Economist* and *Cecile* also made runs into Bermuda along with the *Kate*.[194] In September their vessel *Minho* ran into Bermuda with cotton and rosin from Charleston before being sold to the Navigation Company and lost in October attempting to enter Charleston Harbor. The following month the *Herald* ran out of Charleston and arrived in Bermuda on 17 October 1862. After unloading a cargo of cotton, *Herald* returned to Charleston with a cargo composed of war materials, dry goods and supplies brought in by Fraser, Trenholm and Company ships *Gladiator* and *Ella* and a quantity of goods from the packet *Delta* that provided monthly service between Bermuda and Halifax, Nova Scotia.

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192 Heyliger to Benjamin, 27 December 1862, *ORN*, IV, 1, p. 816.
193 Wise, *Lifeline*, p. 297 and pp. 323-324.
194 Bermuda Consul Dispatches, Consular Dispatches, NA, RG 84.

At Bermuda, St. Georges commission merchant John Tory Bourne was retained to act on behalf of the Confederacy late in 1861. Bourne's first opportunity to serve a Confederate vessel came when the CSS *Nashville* arrived at St. Georges. During that visit Bourne assisted with customs and coaling of the vessel.[195] During the time the *Nashville* was in port the *Fingal* also put into St. Georges on 3 November 1861.[196] While it is unclear if Bourne assisted with the *Fingal*, it is likely that he conferred with Confederate agents Anderson and Bulloch and briefly met with Confederate Commissioner James M. Mason during his visit. Bourne clearly recognized the potential for conducting Confederate business through Bermuda. On 22 January 1862, he wrote Mason:

> I regret that your visit was very unexpected and our interview so short that you could not avail yourself of judging the facilities offered at this Port in a business point of view, as a half way house for commerce between the Confederate States of America and the Mother Country.
>
> With reference to the question now at issue I shall continue to tender my services on every occasion which may come up and trust I may be beneficial in furthering the cause. Any business intrusted to my care shall have my personal attention as heretofore.[197]

In March, Bourne also wrote John Fraser and Company to outline the advantages of routing shipments through the Bermudian ports of St. Georges and Hamilton where he could be of assistance. According the Bourne:

> The port of St. George as you will observe in the Chart is easy of ingress and egress for steamers and sailing vessels of large class, say drawing 20 feet. Our pilots are very skillful and all natives, the facilities for coaling steam ships are greater than in Madeira, the coal there being carried off in lighters; at this Port I put the ships alongside the wharf, coaling with Barrows, which considerably facilitates their movements and in fifteen minutes after their anchor is weighed the ships are at sea. Labor just at this time is

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195 Vandiver, *Bermuda Blockade Running*, p. 8.

196 Bermuda Customs, St. Georges, *Fingal*, 3 November 1861.

197 Bourne Letter Books, Bermuda Archives, p. 14. and Vandiver, *Blockade Running*, p. 8.

> high, namely 5s per diem, 6s & 4d is the usual rate but there are so many ships arriving here and discharging their cargoes to make repairs the labor is scarce.[198]

Bourne also provided the following information on the Port of Hamilton and the Royal Naval Dockyard at Ireland Island:

> The Port of Hamilton is navigable for middle class vessels, drawing 8-12 feet water at 1/2 tide; the passage is narrow and no ship of the "Bermuda" class was even attempted to be taken in there. Vessels bound for the Port of Hamilton generally pass round St. Georges and go a distance of 18 miles before reaching Hamilton and return the same before being at sea. The moorings of all the Man of War are in an open roadstead called Grassy Bay, immediately opposite the Dockyard and when they undergo repairs they are hauled into the Camber which is a kind of Dock built at a very heavy expense by the Admiralty Department.[199]

Before closing Bourne also provided a detailed cost proposal regarding the charges made by Bermuda merchant factors. According to Bourne, Bermuda merchants charged "5% on disbursements of ships paid in cash or bills. 2 1/2% on all goods reshipped, 5% on all articles sold at Private sale or auction." Interest on loans ranged from 5 to 30% although he pointed out that Colonial Law allowed a legal interest of only 7%. Bourne proposed to charge 2 1/2% on disbursements belonging to John Fraser or Fraser, Trenholm and Company and 5% commission on any sales he would be requested to negotiate. Bourne proposed to handle reshipments and transshipments in an unusual manner. For those activities he proposed that:

> ...As your risk and that of Messers Fraser Trenholm & Co with the party concerned are very great, and wishing to use every economy and at the same time furthering the cause at issue, I will defer making any charge for trans shipment of produce either way, but will execute all the Custom House business, writing, &c (which will be considerable) and when you close up all transactions on the acknowledgment of the Confederacy by the European Powers, you will renumerate me as you feel disposed; by this means I risk with all concerned, what my circumstances

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198 Bourne Letter Books, Bermuda Archives, p. 14., and Vandiver, *Blockade Running*, p. 9.

199 Bourne Letter Books, Bermuda Archives, p. 14., and Vandiver, *Blockade Running*, p. 10.

> permit, any loss which may be sustained in transshipment, I also lose a little. At the Custom House in this port I have to Detail myself in the Inward Record Book, every item with marks from manifest, and make inward entries when the cargo (or even a box) is transshipped. I have to repeat the same in the Outward Record Book, pass Outward Entry and clear vessel for Sea.[200]

Bourne also pointed out the difficulty of negotiating large foreign bank bills and cautioned that:

> My offering bills for liquidating the disbursements of steamers arriving here from England and clearing at Customs for the West Indies with Authority opens the business to inquisitive people, therefore it would save considerable trouble for the parties in England to put on board three or four hundred pounds in Gold and insure it, by that means the supercargo with my assistance will be independent; he can put his hands in his pocket and pay down for what he wants at the lowest rate...[201]

Bourne's proposal was apparently acceptable to Fraser, Trenholm and Company and he began to act as their agent in Bermuda. In subsequent letters Bourne also pointed out that the amount of traffic at Nassau made that port dangerous. In corresponding with both John Fraser and Company and Fraser, Trenholm and Company in June 1862, Bourne pointed out that:

> The Federal Cruizers having instructions to intercept all steamers bound to Nassau, I have suggested to Messers Jno Fraser & Co per *Herald* that they divide their business between that port and this, the Cruizers can go to Key West, coal and return to the Bahama Channel in 48 hours, where they can anchor at pleasure, but they cannot do that in these waters, distant 700 to 800 miles from any coal depot-ocean water outside the reef all round Bermuda, they cannot hold on, any accident happening to their machinery the Dock Yard authorities will be very cautious what leniency they give them. Several parties have sent steamers and other vessels of all sorts concerned in this trade, which makes it appear dangerous. We have not had a visit from any of them.[202]

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200 Bourne Letter Books, Bermuda Archives, p. 15., and Vandiver, *Blockade Running*, p. 11.

201 Bourne Letter Books, Bermuda Archives, p. 15., and Vandiver, *Blockade Running*, pp. 11-12.

202 Bourne Letter Books, Bermuda Archives, p. 16., and Vandiver, *Blockade Running*, pp. 19-21.

Bourne's suggestion to John Fraser and Company preceded a similar suggestion from Confederate agent Caleb Huse. On 4 August 1862, Huse wrote to Colonel Josiah Gorgas that "the port of Nassau has become so dangerous even as a port of destination for arms in British ships that I have thought it prudent not to order anything more to that port, for the present at least."[203] To facilitate shifting operations to Bermuda, Gorgas assigned Major Norman S. Walker to Bermuda to oversee Confederate activities and act as disbursing agent. Gorgas also recommended that it was "highly important that light-draft steamers should be purchased and used solely for the transportation of cargoes from Bermuda."[204]

During the summer and fall of 1862, Nassau became even more dangerous due to an outbreak of yellow fever. Sickness and deaths in the islands had a serious impact on both blockade running and those in the trade. The wife of Captain Thomas Lockwood was one of the victims.[205] On 6 August and again on 18 November, Thomas Lockwood ran the John Fraser and Company steamer *Kate* from Nassau through the blockade and into Wilmington. Unfortunately, the crew of the celebrated steamer carried the fever through the blockade and into Wilmington. At Wilmington vessels from Nassau, including the *Kate*, were quarantined in an effort to control the disease.[206] Blockade runners shifting their activities north to Bermuda brought the fever to those islands creating both a medical and a logistical crisis.

As cool weather began to reduce the incidence of yellow fever during the fall of 1862, the Confederate Ordnance Department began to operate several light draft steamers. The base of their operations was established at St. Georges, Bermuda rather than Nassau and the ships would run to Wilmington. No doubt Huse's recommendation of that port and Bourne's promotion of St. Georges had an impact on that decision. Gorgas proposed to have the Bermuda based steamers run into Wilmington for several reasons. That port was not heavily blockaded as was Charleston and it was also the closest open Confederate port to Bermuda. Material brought into Wilmington could be conveniently shipped out on one of several rail connections. The most

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203 Huse to Gorgas, 4 August 1862, in Letters Received by the Secretary of War, 1862, document G. W. D. 733, Confederate Records, NA.

204 Gorgas to J. A. Seddon, 5 December 1862 in Personal File of Josiah Gorgas, Adjutant General's Office, Confederate Records, NA and *ORN*, IV, 2, pp. 227-228.

205 *Wilmington Journal*, 23 September 1862, p. 2, col. 1.

206 *Wilmington Journal*, 3 October 1862, p. 2, col. 2.

important of those being the Wilmington and Weldon railroad that connected Wilmington with Petersburg and Richmond and thus the Army of Northern Virginia.[207]

Gorgas' brother-in-law, Major Thomas L. Bayne, was appointed to organize the Ordnance Bureau's blockade running operations.[208] James M. Sexias was placed in charge of a depot established at Wilmington and Major Norman S. Walker and later Major Smith Stansbury were dispatched to Bermuda to oversee a depot established at St. Georges.[209] The first of the Ordnance Department vessels was the new sidewheel steamer *Cornubia.* The *Cornubia* was built by Harvey and Son of Hayle in 1858 and operated in passenger service on the Thames. On 14 August the *Cornubia* arrived in Cork from London to take on coal for a voyage to Havana.[210] After clearing for Havana the *Cornubia*'s crew experienced problems with the boilers and returned to Scotland for repairs.

On 1 September the United States Consul in Glasgow reported that the *Cornubia* was in Greenock at the mouth of the Clyde for repairs to the steam machinery.[211] There the vessel was rapidly fitted with replacement boilers.[212] Apparently the repairs were carried out without unloading any of the cargo as Union informants reported that the vessel was filled to the decks with coal and suggested that the coal was shipped to hide other material.[213] Early in November the new boilers were tested and the *Cornubia* cleared for the West Indies under the command of Captain John Thomas Holmes. On 3 December 1862, *Cornubia* arrived at Bermuda in "Ballast" after refueling at Fayal. After a brief stop in St. Georges, Captain Holmes cleared for Trinidad and took the *Cornubia* into Wilmington, arriving without incident on 17 December 1862.[214]

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207 Robert C. Black, *Railroads of the Confederacy,* University of North Carolina Press, Chapel Hill, 1952.

208 Special Orders No. 174, Adjutant and Inspector General's Office, 1863 Series, July 1863.

209 Wise, *Lifeline,* pp. 192-194; A. C. Myers to R. P. Waller, 22 July 1863, ORA, IV, 2, pp. 659 and J. Gorgas Memorandum, 23 April 1863, ORA, IV, 2, p. 527.

210 Consular Dispatch, Cork, 14 August 1862.

211 Consular Dispatch, Glasgow, 1 September 1862.

212 Consular Dispatch, Glasgow, 16 September 1862.

213 Consular Dispatch, Glasgow, 14 October 1862.

214 *Cornubia,* Admiralty Records, U. S. District Court of Boston, Judicial Records, RG 21, Federal Archives and Records Center, Waltham, Massachusetts, Bermuda Customs Manifests and Gorgas, "Notes," p. 79.

The voyage of the *Cornubia* marked the beginning of systematic efforts to run between Bermuda and Wilmington.

Although not yet part of the Ordnance Department's fleet, a second Confederate owned steamer was also run into Wilmington in December 1862. That vessel arrived just before midnight on 29 December under the command of Lieutenant John Wilkinson. Wilkinson's vessel was the *Giraffe*, a fast sidewheel steamer purchased by the Treasury and War Department. The *Giraffe* had been employed as a packet between Glasgow and Belfast until purchased for £28,000 by Alexander Collie and Company to run the blockade. At the insistence of Lieutenant Wilkinson, Collie consented to sell the *Giraffe* to the Treasury Department for £32,000 in Confederate bonds with the proviso that the vessel could not be subsequently sold to any private party without his consent.[215] Treasury Department agent Benjamin F. Ficklin proposed to use the *Giraffe* to deliver a cargo consisting of munitions for the War Department and presses, lithographic supplies, paper and lithographers for the Treasury Department to Charleston.[216]

Under the supervision of Ficklin and Captain Wilkinson, the *Giraffe* was converted to run the blockade. The vessel had been built by J. and G. Thomson and Company of Glasgow in 1860 and was fitted with a "beautiful saloon and cabins" for passengers. Those accommodations were dismantled and less attractive but more functional quarters for officers and crew constructed. Conversion of the vessel was accomplished in only a month and the *Giraffe* was ready for sea by November.[217] Under the command of Captain James Alexander Duguid the vessel sailed for Nassau. After stops in Madeira and San Juan, Puerto Rico, Duguid brought the ship into Nassau where he discharged the officers and crew and turned command over to Lieutenant Wilkinson.[218] Wilkinson signed another crew, took on pilots for Charleston and Wilmington and sailed for the South on 27 December. Finding the weather at Charleston "too thick", Wilkinson took the *Giraffe* in at

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215 Consular Dispatch, Glasgow, 17 October 1862 and J. A. Seddon to W. G. Crenshaw, 21 June 1863, *ORA*, IV, 2, pp. 599-602.

216 Extracts of Consular Dispatches, Received by S. P. Lee, 24 December 1862.

217 Extracts of Consular Dispatches, Received by S. P. Lee, 8 December 1862, ORN, I, 8, pp. 265-269; Extracts of Consular Dispatches, Received by S. P. Lee, 13 December 1862 and Consular Dispatches, Liverpool, RG 84, NA and Wise, *Lifeline*, p. 318.

218 *Ibid.* and Consular Dispatch, Glasgow, 17 October 1862.

Wilmington. There the vessel was turned over to the Ordnance Department and renamed *Robert E. Lee.*[219]

During 1863, the connection established between Bermuda and Wilmington by the Confederate Ordnance Department was developed into a reliable and highly effective service. The *Cornubia* and *Robert E. Lee* made monthly trips through the blockade until their capture in November of that year. The Ordnance Bureau also purchased the side-wheel steamer *Merrimac* in 1863. The *Merrimac* was owned by the firm of Z. C. Pearson and Company and under contract to carry a cargo of military supplies and ordnance.[220] Upon arrival in a Confederate port the vessel was to be purchased and shipping on the cargo paid. After the *Merrimac* arrived in Bermuda on 5 September 1862 word of Z. C. Pearson and Company's bankruptcy caught up with the vessel and creditors had the ship seized. Being unable to have the *Merrimac*'s cargo discharged due to proceedings against Pearson and Company, Huse negotiated with Pearson and Company creditors to purchase the steamer using £7,000 in Confederate cotton certificates.[221] The decision to purchase the *Merrimac* was made in spite of recommendations of Captain Thomas Lockwood to John Fraser and Company. Lockwood inspected the *Merrimac* while enroute to Liverpool and found that the vessel was "too slight" to be suitable for blockade running.[222]

By February Bourne wrote Huse that the *Merrimac* was ready for sea and her captain, S. G. Porter, was waiting to secure a crew. Bourne assured Huse that:

> The saving to the CS Govt. will be considerable if quick steamers can be purchased to run in the goods and bring me cotton for reshipment; one trip in and out will very nearly cover ship and all expenses, the "Cornubia" only brought in 300 bales, no more could be got at but she could have carried more. Should the war be prolonged after the closing of Parliament, quick and light draft

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219 S. P. Lee to G. Welles, *ORN*, I, 8, pp. 418-419.
220 Report of A. L. Case, 24 and 27 July 1863, *ORN*, I, 9, pp. 131-133.
221 Consular Dispatch, Bermuda, 21 October 1862, *ORN*, I, 8, p. 872.
222 J. T. Bourne to Messers John Fraser & Company, 11 December 1862, Vandiver, *Blockade Running*, 27.

> steamers may be bought on the Lakes in Canada which will answer during the summer months, particularly about Mobile and no doubt at low rates.[223]

On 13 April, Captain Porter ran the *Merrimac* into Wilmington and delivered three valuable Blakely guns designed to fire 170 pound projectiles. Upon inspection at Wilmington the *Merrimac*'s machinery was found to be in poor condition and the vessel was sold.[224]

In addition to the *Merrimac,* the Ordnance Bureau also purchased the sidewheel steamer *Eugenie.* That vessel was built by M. Samuels & Company of Hull and was purchased new. By May 1863, the *Eugenie* joined the *Cornubia* and *Giraffe* in running into Wilmington. The less successful *Eugenie* was also put into service May but damage suffered running into Wilmington in September required months to repair. The repairs appear to have not been entirely satisfactory and in December the ship was dispatched to Nassau and ultimately back to Liverpool where it was eventually sold.[225]

When contracts with English captains expired during the summer of 1863, Gorgas transferred registration of vessels to the Confederate Government and placed Confederate Navy officers in command. Lieutenant Richard N. Gayle was assigned to command the *Cornubia* and Lieutenant Joseph Fry was assigned to the *Eugenie.* Instructions for the operation of Ordnance Bureau steamers was spelled out in a communication from Sexias to Lieutenant Gayle.[226]

According to Sexias' instructions, engineers on the vessel had to have the written approval of the captain to serve on the ship, no passengers or private freight was permitted aboard without Sexias' permission and cargo manifests were to be presented to War Department personnel as soon as the vessel made port in either Bermuda or Wilmington. The captain was to

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223 Bourne to Major Caleb Huse, 10 February 1863, Vandiver, *Blockade Running,* p. 39.

224 Consular Dispatch, Liverpool, 11 January 1863, RG 84, Reel 23, Consular Dispatch, 3 February 1863, RG 84, Reel 6, Report of W. H. C. Whiting, 25 April 1863, ORN, I, 8, p. 872, A. L. Case to S. P. Lee, 24 July 1863, *ORN,* I, 9, pp. 129-130, A. L. Case to S. P. Lee, 27 July 1863, *ORN,* I, 9, p. 133.

225 Wise, *Lifeline,* p. 289.

226 J. Gorgas to R. H. Gayle, 6 May 1863, *ORN,* I, 9, pp. 279-280 and J. M. Seixas to R. H. Gayle, 15 June 1863, *ORN,* I, 9, p. 281.

approve in writing all disbursements made by the purser and all accounts related to the operation and maintenance of the vessel were to be submitted to Sexias' office. The officers and crew of War Department vessels were to be paid in gold but bonuses for a successful run could be paid in Confederate currency. The officers and crew were paid according to the following scale and received a bonus, equal, or almost equal, to the amount of pay received for each round trip run from Wilmington to Bermuda.[227]

Position	Round Trip Wage	Bonus
First Officer	$200	$200
Second Officer	$100	$80
Third Officer	$60	$50
Pilot	$300	$100
Purser	$60	$60
Quartermaster	$50	$40
Boatswain	$50	$50
Seaman	$40	$40
First Engineer	$300	$200
Second Engineer	$150	$100
Third Engineer	$100	$80
Fourth Engineer	$80	$70
Fireman	$50	$50
Trimmers	$40	$40
Engineer Storekeeper	$25	$25
Chief Steward	$60	$60
Second Steward	$40	$40
Chief Cook	$50	$50
Waiters	$25	$25
Mess Boys	$25	$25 [228]

Ordnance Bureau wages and bonuses were not comparable with the civilian market and did not permit vessel captains to compete for reliable officers and crew. The officers and crew of the *Venus* owned and operated by Captain Crenshaw and Alexander Collie paid considerably more than that allowed by the Confederate Government. The following wage scale illustrates the disparity:[229]

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227 J. M. Sexias to R. H. Gayle, 15 June 1863, *ORN*, I, 9, p. 281 and J. M. Seixas Memorandum, 27 June 1863, *ORN*, I, 9, p. 282.
228 *Ibid.*
229 Wise, *Lifeline*, p. 111.

Position	Round Trip Wage	Bonus
Captain	$2,500	$2,500
First Officer	$600	$600
Second Officer	$375	$375
Third Officer	$375	$375
Pilot	$1,750	$,750
Crewman	$125	$125
Chief Engineer	$1,250	$1,250

In July 1863, Fraser, Trenholm and Company sold the Ordnance Bureau a fourth steamer. That vessel was the steel screw steamer *Phantom* built by W. C. Miller and Son for Fraser, Trenholm and Company and powered by Fawcett, Preston and Company machinery. Fraser, Trenholm and Company captain Eugene L. Tessier brought the *Phantom* out to Bermuda and in July ran the steamer into Wilmington. There title was transferred to the Confederacy and S. G. Porter took command.[230]

In spite of the well publicized vessel losses and bankruptcy of Z. C. Pearson and Company in 1862, the success of the John Fraser and Company and Fraser, Trenholm and Company steamers induced more British and Confederate companies to engage in running steamers through the blockade. That was reinforced by Confederate abandonment of the quasi-cotton embargo. The success of the Fraser, Trenholm and Company and Ordnance Bureau steamers demonstrated that the blockade could be successfully broken on a reliable basis and attracted considerable attention. In 1863, the intensity of blockade running also increased because Confederate demands for both civilian and military imports increased.

Those high profits and increased demand attracted a number of additional firms to the trade that developed between England and the Confederacy. One of the most important British firms was Alexander Collie and Company of London and Manchester. Collie and Company put the Dudgeon built double screw steamer *Flora* into service in January 1863 and the sidewheel steamers *Ruby* and *Granite City* into service between in February

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230 Consular Dispatch, Liverpool, 1 May 1863, Extracts, Received by S. P. Lee, 21 June 1863 and Extracts, Received by S. P. Lee, 5 July 1863, Extracts, Received by S. P. Lee, 5 July 1863, S. Stansbury to Captain S. G. Porter, 16 August 1863, Stansbury Letterbook, BA, Hamilton and Wise, *Lifeline,* p. 235 and J J. Almy to S. P. Lee, 23 September 1863, *ORN*, I, 9, pp. 216-217.

1863.[231] The *Granite City* made one run into the Cape Fear on 25 February and was captured near Eleuthera after running out of Wilmington on 22 March 1863. The *Ruby* was more successful and ran in and out of Charleston until run ashore near Lighthouse Inlet on the South Carolina coast on 11 June 1863.[232] The Dudgeon twin screw *Flora* proved to be the most successful and operated between Nassau and both Wilmington and Charleston until being sold by Collie and Company in September 1863.[233]

Alexander Collie and Company also entered into an agreement with Captain William G. Crenshaw and the Confederate Government to establish and operate a small fleet of blockade runners. Captain Crenshaw, an artillery officer and prominent Richmond, Virginia merchant, had made a proposal to supply war materials to Confederate Secretary of War James Seddon. Seddon accepted Captain Crenshaw's proposal and dispatched him to Europe. There he was to identify and contract with a suitable firm to procure and ship war materials through the blockade.[234] Crenshaw was authorized to purchase necessary war materials and supplies and to purchase or contract for the construction of ships to transport cargoes to the South. He and an acceptable firm would receive a 2.5% commission on purchases, ships and the sale of cotton their steamers brought out of Confederate ports.[235]

By March, Captain Crenshaw was in London working in conjunction with Confederate Commissioner James Mason to secure loans backed by cotton that would support his enterprise. In London Mason met Alexander Collie and with Mason's assistance a formal business agreement was negotiated. Although the arrangement was not entirely satisfactory with Caleb Huse, the agreement with Alexander Collie and Company was signed and soon produced the desired results. On 30 March 1863, Captain Crenshaw reported that he had been able, with permission from Collie and Company to take over that firm's

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231 L. Heyliger to J. A. Seddon, 10 January 1863, *ORA*, IV, 2, pp. 335-336.

232 S. F. Du Pont to G. B. Balch, 28 June 1863, *ORN*, I, 14, p. 301 and G. B. Balch to S. F. Du Pont, 29 June 1863, *ORN*, I, 14, p. 301-302.

233 J. T. Gordon notebook captured on *Cornubia*, 4 September-7 November 1863, ORN, I, 9, pp. 277-279 and "Vessel Papers.", Reel 11, *Flora*, NA.

234 A. R. Lawton to J. B. Fergerson, 12 October 1863, *ORA*, IV, 2, p. 870, A. R. Lawton to J. B. Fergerson, 12 October 1863, *ORA*, IV, 2, p. 870 and C. Huse to J. M. Mason, 4 July 1863, *ORA*, IV, 2, pp. 628-629.

235 J. A. Seddon to J. M. Mason, 18 December 1862, ORA, IV, 2, pp. 244-245 and Samuel B. Thompson, *Confederate Purchasing Operations Abroad*, University of North Carolina Press, Chapel Hill, 1935, p. 22.

contract for a series of four double screw steamers from William and John Dudgeon. The steamers were to be constructed on the lines of the *Flora* which was already operating successfully through the blockade.[236] On 11 April, Crenshaw reported the purchase of a "fast side-wheel steamer for £26,000" that could be used within the week to take out material already purchased and in great demand in the South.[237] Crenshaw's letter also contained a reminder that Secretary Mallory had indicated several "first-rate" naval officers would be assigned to command the steamers.

With Seddon's approval, Crenshaw proposed to set up one or more depots for war material and supplies in "the islands." Like the plan first proposed by John Fraser and Company, fast steamers would operate between the island depots and ports on the Confederate coast. Crenshaw felt that their operation could be almost as regular as "packets."[238] The John Fraser and Company vessel *Kate* had already established an impressive record of regularly running between Charleston and Nassau and the *Cornubia* was making consistent runs into Wilmington from Bermuda. To facilitate and coordinate logistics, Collie's agents in Bermuda and Nassau would also service vessels under the Collie and Crenshaw Contract. In Bermuda that agent was John T. Bourne and in Nassau, a Collie employee, Mr. Watson, would represent the firms. Captain Crenshaw's brother James R. Crenshaw was appointed to oversee and manage the operations at Charleston and Wilmington.[239]

The first Collie and Crenshaw steamer to arrive at Bermuda was the *Venus*. The new side-wheel river steamer entered at St. Georges on 10 June 1863 and cleared customs the following day with a cargo of "general merchandise." After repainting the vessel white and removing all but the lower masts the *Venus* cleared for Nassau two days later. On 14 June the *Venus* departed for "Nassau" and arrived safely at Wilmington with the first cargo shipped by Crenshaw and Collie four days later. Under the command of Charles Murray the *Venus* maintained a monthly service between Wilmington and Bermuda until October.[240]

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236 W. G. Crenshaw to J. A. Seddon, 30 March 1863, *ORA*, IV, II, pp. 480-482.
237 W. G. Crenshaw to J. A. Seddon, 11 April 1863, *ORA*, IV, II, pp. 478-489.
238 *Ibid.*, pp. 480-482.
239 *Ibid.*, pp. 497-498.
240 Bermuda Consular Dispatches, 12 June 1863 and St. Georges Customs Book, Inbound 1862-1863, BA.

The first of the Dudgeon vessels purchased by the Confederacy in conjunction with Crenshaw and Collie, *Hebe,* cleared and departed London on 12 May. Although Collie and Crenshaw had loaded their 25% of the cargo, not all of that consigned to the Confederate Government was "shut out" and not put on board. Because of bad weather in the channel the captain laid over several days at Falmouth.[241] By 30 June the *Hebe* was in Nassau. There with assistance from Louis Heyliger and L. G. Watson the vessel was coaled and took on additional cargo for the run into Wilmington. *Hebe* made the first run through the blockade without incident and cleared Wilmington for the return trip to Nassau on 6 August 1863.[242] There *Hebe* quickly unloaded a cargo of cotton and loaded much needed winter supplies shipped from England by Collie and Crenshaw for the Quartermaster General. During the second week of August the *Hebe* cleared Nassau and headed back to Wilmington for a second attempt at running the blockade. On the morning of 18 August 1863, the *Hebe* was discovered heading down the North Carolina coast north of New Inlet by the USS *Niphon*. Upon being discovered, the captain headed *Hebe* west and ran the vessel onto the beach immediately east of a small earthworks approximately nine miles north of Fort Fisher.[243]

A prize crew from the USS *Niphon* under the command of Acting Ensign W. W. Crowninshield boarded the *Hebe* to determine if the vessel could be salvaged. However, the ship was full of water and rough seas were already breaking over the hull. Acting Ensign Crowninshield decided that the *Hebe* could not be saved and set the vessel ablaze before abandoning the ship under fire from Confederate infantry and cavalry on the beach. While the Confederate infantry and cavalry fired at Crowninshield's party, Confederate artillery in the dunes engaged the USS *Niphon* with a 12 pdr rifled Whitworth field piece.[244]

On 23 August, the USS *Minnesota* and five other vessels returned to destroy the *Hebe*. Again, Captain Munn engaged the fleet with a Whitworth and two other small rifled cannon from the earthworks in the dunes. Munn kept up an effective fire until his ammunition was exhausted and his position

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241 J. R. Crenshaw to J. A. Seddon, 15 May 1863, *ORA*, IV, II, pp. 554-555.
242 Wise, *Lifeline*, p. 243.
243 J. B. Breck to A. Ludlow Case, 18 August 1863, *ORN*, I, 9, pp. 166-167.
244 *Ibid.*

was threatened by a superior force which was landed on the beach north of his batteries. When the Confederates retreated towards Fort Fisher they were unable to withdraw the field pieces by hand and the artillery was captured.[245] In his report concerning the *Hebe* skirmish, Major-General Whiting lamented:

> The efforts of the enemy to stop our steamers is increasing. Their force is largely increased. I have met with a serious and heavy loss in that Whitworth, a gun that in the hands of the indefatigable Lamb has saved dozens of vessels and millions of money to the Confederate States. I beg that a couple of the Whitworth guns originally saved from the *Modern Greece* may be sent here at once. Their long range makes them most suitable for a seaboard position. Could I get them with horses we could save many a vessel that will now be lost to us.[246]

Two months after the destruction of the *Hebe,* the *Venus* broke her traditional pattern of running between Bermuda and Wilmington. In October 1863, the vessel sailed to Nassau to take on material for the Quartermaster General that had been accumulating there during the late summer and early fall. At 12:30 am on 21 October, the *Venus* was discovered attempting to reach New Inlet. Southeast of Masonboro Inlet, the USS *Nansemond* overtook the blockade runner and opened fired. One of the USS *Nansemond* 's shot struck the port paddle guard near the waterline and sprung a plate. With the vessel rapidly taking on water Captain Murray decided to run the ship ashore near the wreck of the *Hebe.*[247]

A boarding party from the *Nansemond* immediately captured the officers and crew of the *Venus* and attached hawsers to the stern. The *Nansemond* and *Niphon* attempted to pull the stranded steamer into deep water without success. As the steamer could not be pulled off, Lieutenant Lamson ordered the vessel burned and the boarding party was forced to abandon the ship as the light exposed them to a sharp fire from the beach. Before dawn the *Nansemond, Niphon* and *Iron Age* shelled the vessel until

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245 *Ibid.*

246 W. H. C. Whiting to J. A. Seddon, 24 August 1863, *ORN*, I, 9, pp. 173-174 , Z. B. Vance Papers, P. C. 153, p. 299, NCDAH and *Wilmington Daily Journal*, 24 August 1863, p. 2, col. 1.

247 R. H. Lamson to S. P. Lee, 21 October 1863, *ORN*, I, 9, pp. 249-250 and *Wilmington Journal*, 29 October 1863, p. 1, col. 2.

both the hull and machinery were completely destroyed.[248] Destruction of the *Venus*, and particularly her cargo, was disastrous for the Quartermaster Department.

At the end of September, the second Dudgeon vessel arrived in Bermuda under the command of Captain G. H. Beir. On 28 September, the *Dee* cleared St. Georges customs with 220 packages of "General Merchandize."[249] After being repainted a light lead color the *Dee* took on 30 cases of bacon and 100 bags of coffee from warehouses in St. Georges and cleared for Nassau on 3 October. Four days later Captain Beir ran the *Dee* into Wilmington. On 20 October *Dee* was back in St. Georges with a cargo of more than 500 bales of cotton, 175 packages of tobacco, and 135 barrels of turpentine.[250]

On 8 November, the third twin screw vessel, *Ceres* arrived in Bermuda. In St. Georges the *Ceres* discharged 499 fire bars, 8 bearing bars, 3 backing plates, 3 dead plates and 150 boiler tubes. After receiving "a coat of light paint" and discharging that portion of her cargo, *Ceres* cleared for Nassau and ran to Wilmington on 2 December.[251] The *Ceres* was not as fortunate as the *Venus* and *Dee* and was destroyed during the first attempt to run the blockade. On the night of the sixth the *Ceres* was run aground on Western Bar Shoal at the old entrance to the Cape Fear. Before abandoning ship the crew set fire to the vessel. At high tide the following morning the vessel refloated and was towed off by the Union tug *Violet*. [252]

Vesta, fourth of the Dudgeon vessels, arrived in Bermuda from Plymouth on 28 December 1863 under the command of Captain J. V. Eustice.[253] Like the *Ceres*, *Vesta* cleared customs in St. Georges with a cargo of "general manufactured merchandise" and was painted a light lead color. Additional cargo, including whiskey, beer, bacon and books, from a half-dozen vessels that had been stored in St. Georges warehouses was quickly put onboard and the steamer cleared for Nassau on 2 January.[254] On the morning of 11 January, Captain Eustice ran the steamer ashore on the North Carolina coast west of

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248 R. H. Lamson to S. P. Lee, 21 October 1863, *ORN*, I, 9, pp. 249-250.
249 Bermuda Customs, Inbound Record Book 1862-1863, BA.
250 Bermuda Customs, Inbound Record Book 1862-1863, *Dee*, 20 October 1863, BA.
251 *Ibid.*
252 S. P. Lee to G. Welles, 17 December 1863 and Thomas Stothard to S. P. Lee, 7 December 1863, *ORN*, I, 9, pp. 336-338.
253 Bermuda Customs, Inbound Record Book 1862-1863, *Vesta* , 28 December 1863, BA.
254 Bermuda Customs, Outbound Record Book 1863-1864, *Vesta* , 3 January 1863, BA.

Tubbs Inlet. By morning the officers and crew had abandoned the ship and set it on fire.[255]

The following month *Dee*, most successful of the Dudgeon vessels running for Crenshaw, Collie and the Quartermaster Department, was lost in February 1864. About 3:30 a.m. on the morning of 5 February, Captain Beir ran the *Dee* ashore at Masonboro Inlet. Being unable to get the vessel off, Captain Beir ordered the ship and her cargo burned. Once the vessel was fired most of the officers and crew escaped to the beach in one of the ship's boats.[256]

Loss of the Crenshaw, Collie and Confederate steamers attracted both government and public attention to the arrangement. In August 1864, the *Raleigh Standard* questioned the significance of the loss of all of the vessels running in association with the Confederate contract. The editorial also pointed out that virtually all of the vessels being run by and for Alexander Collie and Company were still operating successfully. The article bluntly pointed out that the *Vesta* had been senselessly run aground and burned. When an inquiry was set up at Wilmington to investigate the matter, the captain and first officer secretly boarded another Collie vessel, the *Hansa*, and departed for England.[257]

In a 14 November 1863, report on the Confederate States Navy Office of Provision and Clothing Paymaster John De Bree complained that:

> Under a contract of Messrs. Crenshaw & Co. with the navy Department we have received two or three small shipments, but I feel constrained to say that they are ill assorted and not of the quality we had a right to expect. The schedules furnished the navy Department (as I presume for this contract) have not been complied with, and articles especially ordered for first shipment have never come.
>
> Shoes were particularly specified as being of great want. Not one pair have we received.
>
> It may be that their losses by sea have prevented a better execution of this contract, but as far as is known to me neither in quantity, quality, nor manner has it come up to a proper standard.[258]

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255 E. F. Devens to S. P. Lee, 11 January 1864, *ORN*, I, 9, pp. 403-404.

256 W. F. Spicer to B. F. Sands, 6 February 1864, *ORN*, I, 9, pp. 467-468.

257 *Raleigh Standard*, 24 August 1864.

258 J. De Bree to S. R. Mallory, 14 November 1863, *ORN*, II, 2, p. 556.

The agreement with Crenshaw and the Quartermaster Department was not the only one Alexander Collie made in 1863. In August 1862, North Carolina Adjutant General James G. Martin concluded that it would be necessary to procure supplies for North Carolina regiments in Europe. Unlike the rest of the South, North Carolinians elected to supply and equip the soldiers they provided for the defense of the Confederate States. Although North Carolina anticipated few problems in producing or obtaining the necessary clothing, equipment and arms, shortages began to appear by the summer of 1862 and, it was apparent that supplies would not be sufficient for the coming winter. In August Adjutant General James G. Martin suggested that the State obtain the necessary supplies and arms in England and purchase a vessel to bring them through the blockade. Martin made the suggestion to Governor Henry T. Clark but the decision fell to newly elected Governor Zebulon B. Vance.

Vance conferred on the matter with attorney Bartholomew F. Moore and *Raleigh Standard* editor William W. Holder. Although Moore warned Vance and Martin that they could be exposing themselves to impeachment charges, Martin:

> ....took the ground that the laws of the state made it his duty to supply clothing for the troops....; that a large sum of money was appropriated for the purpose without any restriction as to where purchases were to be made; [and] that the supplies of the State were not adequate;....As to the purchase of a ship, General Martin took the ground that he had as much right to do that as purchase many other articles not mentioned in the law, it being known that transport ships are a part of the equipment of all modern armies.[259]

Governor Vance agreed with Martin and on 19 November 1862, he privately presented the plan to members of the General Assembly. In a secret session held on 27 November, the legislators approved the Governor's proposal and appropriated two million dollars to purchase both the necessary supplies and a

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259 A. Gordon, "Organization of Troops," in Histories of the Several Regiments and Battalions from North Carolina in the Great War, 1861-1865, Walter Clark editor, 5 Vols.; Goldsboro North Carolina, Nash Brothers 1901, Vol. I, pp. 28-29.

suitable vessel. As Vance had already dispatched John White to England to act as a special purchasing agent, the legislature also approved any contracts that White might have negotiated.[260] Martin was to pay for the supplies and vessel using money obtained by selling cotton bonds secured by cotton purchased using the appropriation of the legislature. The bonds paid 7% interest until the bondholders took delivery at any Confederate port east of the Mississippi River.[261]

After White began selling the bonds he entered into an agreement with the firm of Alexander Collie and Company of London and Manchester. Collie and Company agreed to assist with marketing the bonds and securing and shipping war and industrial material for a 5% commission. They also agreed to provide and advance $1,500,000 so White could purchase the Glasgow steamer *Lord Clyde* and more than two hundred fifty tons of merchandise that included leather for shoes and accoutrements, material for uniforms, blankets, thread and buttons.[262]

White placed approximately half of the goods he had purchased aboard the *Lord Clyde* and on 30 May the steamer departed Cardiff for Bermuda. The *Lord Clyde*, under the command of Joannus Wylie, arrived at St. Georges on 14 June, fifteen days out of Cardiff. While in St. Georges the *Lord Clyde* was painted a light color, the top masts and spars were removed and the ship was loaded with coal for the trip through the blockade.[263] Because a suitable Wilmington pilot could not be found, Captain Wylie delayed the *Lord Clyde*'s departure until 22 June.

The *Lord Clyde*'s first run through the blockade was uneventful and the steamer arrived in Wilmington with a cargo of shoe leather, uniform material, thread, buttons, blankets, 100 bags of coffee, 180 kegs of rum and 69 boxes of brandy.[264] When Captain Wylie brought the renamed *A. D. Vance* back to Bermuda in July, the vessel carried 500 bales of cotton and 10 barrels of

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[260]North Carolina, General Assembly, Public Laws, "Resolution from the Joint Select Committee on the Verbal Message of the Governor," Secret Session, Raleigh, 1865, pp. 71-72.

[261]North Carolina General Assembly, Public Laws, "An Act Making an Appropriation to Purchases in Europe,"Adjourned Session, 1863, p. 28.

[262] Report of John White, Governor's Papers, File 182; John White to Z. B. Vance, 20 May 1863, Governor's Letter Book, Vol. I, p. 229, NCDAH.

[263] Consular Dispatches, Bermuda, 17 June 1863.

[264] Bermuda Customs, Outbound Record Book 1863-1864, *Lord Clyde* , 20 June 1863, BA.

turpentine.[265] The speed of the *A. D. Vance* and the skill of her master made the North Carolina steamer highly successful. However, by September, Governor Zebulon B. Vance wrote John White that he felt:

> blockade running is becoming more and more perilous.... In view of this danger, you are instructed to make no more purchases of goods for the present. The amount received and now at Bermuda, with the home supplies, will keep our troops well going for twelve months and of course it is not desirable to have goods on hand which we cannot ship.[266]

The Governor's instructions did not reach White until 21 October 1863. By that time White had purchased a great deal of additional material. Realizing that it would be too much for the *A. D. Vance* to transport, he had given tentative approval to an expansion of the agreement with Alexander Collie and Company. The new agreement proposed by Collie was:

> To furnish with as little delay as possible <u>four</u> steamers of the most suitable description for blockade running, in each of which your State will own one fourth interest, the other three fourths being held by myself and friends.
>
> To give up to the Government of your State when required, the entire inward carrying power of said steamers from the Islands to the Confederacy at a modest rate to be fixed hereafter.
>
> That the Government of your State be entitled to one fourth space of the outward carrying power of each steamer, for cotton or other produce; and this arrangement will I estimate yield to your State funds sufficient to pay costs and all charges on inward cargo, cost of its share of the outward cargo and (if cotton of good quality be sent out) a very large surplus will be left at the credit of your State on each trip.[267]

The Collie proposal was convincing and Governor Vance received General assembly approval for the contract following a secret session held on 12

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265 Bermuda Customs, Inbound Record Book 1863-1864, *Lord Clyde* , 27 July 1863, BA. Historical Sources Identify the Vessel As *Ad Vance, A. D. Vance* and *Advance.*

266 Z. B. Vance to J. White, 3 September 1863, Governor's Letter Book, I, p. 324.

267 A. Collie to J. White, 1 October 1863, Governor's Papers, File 170.

December 1863.[268] Under the expanded contract Collie provided 25% interest in the sidewheel steamer *Hansa* and twin-screw steamer *Don* that had been put into service in July and August 1863. A third steamer would be placed in service within four weeks and the final vessel added to the fleet within two months.[269] Control of the vessels' schedules created immediate friction between Governor Vance and Collie's Wilmington agent Theodore Andrea and the loss of the *Don* after only two runs on joint account in March 1864 got contract activity off to a bad start.[270]

Operation of the *Hansa* proved to be equally controversial but considerably more successful. On the first trip out of Wilmington under the joint contract the *Hansa* was chased and forced to throw overboard 70 bales of cotton to avoid capture.[271] In March, the vessel became the object of a jurisdictional dispute between the Confederate Army and Confederate Navy which required President Jefferson Davis' attention to resolve.[272] The *Hansa* was also taken out of service for eight months and returned to England to replace badly deteriorated boilers.[273] When the *Hansa* returned to service, it ran successfully until the fall of Fort Fisher closed the Port of Wilmington in January 1865.

On 18 March the third Collie steamer arrived at Nassau.[274] The *Annie*, like the *Don*, was one of the fast Dudgeon twin screw steamers. Between March and October 1864 the vessel made six round trips through the blockade at Wilmington. On the final trip into the Cape Fear on 8 October, *Annie* was chased ashore on Caroline Shoal at New Inlet. After guns from Fort Fisher drove vessels of the blockade away, the cargo was removed and the following day the vessel was refloated and towed into the safety of the Cape Fear. That narrow escape prompted Vance to accept an offer from Collie's new agent in Wilmington to purchase the state's share in the vessel. The offer was accepted

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268 North Carolina, General Assembly, Public Laws, "Resolution Authorizing the Governor of the State to Unite with Alexander Collie and Company in Purchase of Vessels," Secret Session, 1865, pp. 74-75.

269 Agreement, A. Collie and J. White, 27 October 1863, Governor's Papers, File 170, NCDAH.

270 Wise, *Lifeline*, pp. 296 and S. P. Quackenbush to S.P. Lee, 4 March 1864, *ORN*, I, 9, p. 525.

271 Nassau *Guardian*, 9 January 1864, p. 3, col. 2.

272 Z. B. Vance to J. A. Seddon, 7 January 1864, *ORA*, IV, 3, pp. 10-11; J. Davis to Z. B. Vance, 26 January 1864, *ORA*, I, 33, pp. 1219-1229 and J. A. Seddon to Z. B.Vance, 14 January 1864, *ORA*, IV, 3, pp. 28-29.

273 Flanner to Vance, 2 May 1864, Governor's Papers, File 177, NCDAH.

274 Consular Dispatch, Teneriffe, 2 February 1864, *ORN*, I, 9, p. 539 and *London Index*, 2 June 1864.

for $24,000 in gold.[275] That decision proved fortuitous as the *Annie* was captured on 1 November 1864 after running aground leaving Wilmington.[276]

The fourth steamer promised under the contract was never delivered. Collie proposed to purchase and employ a larger and faster vessel that "lengthened experience has proven to be best suited to the service..."[277] Collie's proposal received no response and Collie wrote Vance again on 14 March to inform the Governor that: "Summer is coming on when the chances of success are lessened, unless great speed can be obtained. We prefer therefore to delay a month or two to get the sort of boat we can send out with confidence..."[278] The final decision was ultimately made to cancel the fourth vessel and the Collie contract due to Confederate regulation of vessels engaged in blockade running and criticism concerning the loss of the steamer *A. D. Vance* in September 1864.[279]

In 1863, a number of individuals, joint ventures and smaller firms also initiated blockade running operations that served Wilmington. Unlike ships that were owned and operated by the Confederacy, the State of North Carolina or the Collie and Collie and Crenshaw vessels, most ran to Nassau. London ship owner and merchant Thomas Sterling Begbie, owner of the *Columbia* which was captured in 1862, put the screw-steamer *Emma* in service in February. Before being captured in July, *Emma* made more than a dozen round trips through the blockade off Wilmington.[280] Otto T. Fallenstein's screw steamer *Douro* ran into Wilmington in February 1863 before being captured the following month.[281] A joint venture, the "Steamship *Pet* Company," was formed specifically to purchase and operate that screw steamer as a blockade runner. The enterprise was highly successful and *Pet* made sixteen round trips through the blockade before being captured in February 1864.[282]

275North Carolina, Executive and Legislative Documents, 1864-1865, Document Number 7, "Blockade Statements, 1866, p. 7.

276 P. G. Watmough to D. D. Porter, 1 November 1864, *ORN*, I, 11, pp. 31-32 and E. Kemble to D. D. Porter, 1 November 1864, *ORN*, I, 11, p. 33.

277 A. Collie to Z. B. Vance, 13 February 1864, no.1, Governor's Papers, File 174, NCDAH.

278 A. Collie to Z. B. Vance, 14 March 1864, Governor's Letter Book, I, pp. 508-509.

279 Z. B. Vance to A. Collie, 2 November 1864, Governor's Letter Book, I, p. 604.

280 S. P. Lee to G. Welles, enclosure identified "Capture of the anglo-rebel steamer *Douro*" *ORN*, I, 8, pp. 592-593 and Wise, *Lifeline*, p. 298.

281 Wise, *Lifeline*, p. 296.

282 *Ibid.*, p. 316.

The Great Lakes steamer *Arabian* built by the Niagara Harbor Company was purchased by Robert H. Sawyer and Ramos A. Menendez and converted for blockade running in June 1863. Although unsuited for the Atlantic environment the *Arabian* made profitable runs from Nassau to Wilmington in June, July, August and September before being captured in an attempt to run out of New Inlet in late September 1863.[283]

Leech, Harrison, Forewood and Company was a Liverpool firm that began running the sidewheel steamer *Scotia* during the summer of 1862 That vessel was captured on 24 October 1862 attempting to enter Charleston through Bulls Bay. In February, Leech, Harrison and Forewood put the sidewheel steamer *Britannia* in service between Wilmington and Nassau. That vessel proved to be more successful but, was captured after five months of operation.[284]

One of the larger Confederate firms that sprang up in the wake of John Fraser and Company was the Chicora Importing and Exporting Company of South Carolina. That Charleston based firm was owned and operated by a group of Charleston merchants and businessmen. Archibald Johnson, a prominent Charleston merchant served as the president. Shareholders included banker George W. Williams and merchant Theodore Wagner, also one of Alfred Trenholm's partners in John Fraser and Company.[285] The firm began operations in September 1862 with the steamer *Herald*, purchased from John Fraser and Company. Under the command of Robert Lockwood, *Herald* made voyages between Nassau and Charleston and in the fall, Wilmington. During a run into Wilmington under the command of W. F. Adair, the vessel was driven ashore and destroyed off Frying Pan Shoals on 19 December 1863.[286] Chicora also purchased the Glasgow and Dublin steamer *Havelock* and operated the vessel between Charleston and Nassau in February 1863. By autumn, the operations of the *Havelock*, renamed *General Beaureguard*, were

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283 *Ibid.*, p. 288.

284 *Ibid.*, p. 291.

285 Cotton and Captured Property, Depositions of R. Dowie, F. Richards, A. Johnson and G. Williams, T. D. Wagner Papers, South Carolina Historical Society, Charleston, Marcus W.Price, "Blockade Running as a Business in South Carolina during the War Between the States, 1861-1865."*American Neptune* IX, January 1949, pp. 31-62.

286 S. P. Lee to G. Welles, 26 December 1863, *ORN*, I, 9, p. 362.

also shifted to Wilmington and only eight days prior to the loss of the *Antonica,* the *General Beaureguard* was driven ashore near Flag Pond Battery north of Fort Fisher.[287]

The Importing and Exporting Company of South Carolina shifted a portion of its steamer traffic to Wilmington in 1863. The company had been formed in 1862 and purchased and operated the coastal steamer *Cecile* until the vessel ran aground on Abaco Reef in the Bahamas. Primarily because of the success of the *Cecile,* the company authorized the sale of additional stock amounting to $200,000.[288] With new capital the firm purchased the Southern Steamship Company vessel *William G. Hewes* in Havana and the sidewheel steamers *Sirius* and *Orion* in West Hartlepool, England. To run the blockade those vessels were renamed *Ella and Annie, Alice,* and *Fannie* respectively. In June 1863, the company also purchased the steamer *Margaret and Jessie* from Fraser, Trenholm and Company. During the latter half of 1863, Importing and Exporting Company of South Carolina steamers ran consistently out of Wilmington under the direction of William C. Bee and directors that included William Ravenel, W. P. Magarth, Benjamin Mordecai, C. T. Mitchel, E. L. Kerrison and Theodore Jervey.[289]

The British owned joint-venture Anglo-Confederate Trading Company also shifted operations to Wilmington in 1863. The company was organized by members and associates of the firm of Edward Lawrence and Company. After a partially successful experience with the vessel *Despatch* in 1862, the firm contracted with Jones, Quiggan and Company for a fast new steamer. That vessel was the *Banshee,* a steel side-wheel steamer. Although registering acceptable speed during her trials, the vessel was only capable of nine knots loaded and the thinner steel plates used in construction of the hull leaked excessively. Under a full press of steam the engines were capable of pushing the hull into seas that crushed plates and sprung rivets. In spite of those problems the *Banshee* made fifteen trips through the blockade before being captured attempting to enter Wilmington on 21 November 1863.[290]

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287 D. B. Ridgely to S. P. Lee, 16 December 1863, *ORN,* I, 9, pp. 354-355 and S.P.Lee to G. Welles, 16 December 1863, *ORN,* I, 9, p. 355.

288Marcus W.Price, "Blockade Running as a Business in South Carolina during the War Between the States, 1861-1865." pp. 31-62.

289Wise, *Lifeline,* pp. 114-115.

290 *Ibid.,* pp. 112-113 and S. P. Lee to G. Welles, 24 November 1863, *ORN,* I, 9, pp. 318-319.

In spite of Union efforts to curtail the Confederacy's foreign commerce, blockade running activity increased dramatically during 1864. Unfortunately, the impetus for much of that activity was the high potential for profit associated with success. While vessels operated by Confederate government agencies, states and private enterprises with government contracts or in partnership with Confederate agencies or states brought in significant quantities of war materials and supplies, many vessels were loaded with non-essential goods selected to command the highest market prices. Because of competition created by the civilian market, many vessels refused to carry war materials at government established freight rates. Such abuses were the subject of a continuous stream of correspondence from General W. H. C. Whiting to the Confederate War Department. Although General Whiting was informed that the War Department had no authority to interfere with commerce unless loyalty was in question, he was accused of forcing the captains of vessels running the blockade to obtain military authorization to sail. Whiting was also accused of delaying the assignment of pilots in order to secure space for government cargoes.[291] Whiting's action received some encouragement in June when Seddon suggested that he use his authority to require the transportation of cargoes on government account.[292]

The situation was acerbated in the fall by the loss of ships owned by the Confederate government. During September 1863, the *Phantom* was run ashore and burned near Topsail Inlet and in October, the *Cornubia* and *Robert E. Lee* were captured leaving the Confederacy with no vessels to carry military freight. Secretary of War Seddon determined that by the fall of 1863, the cost of shipping 300 tons of freight by steamer from one of the West Indies islands was "upwards of two million dollars."[293] Ultimately the lack of vessels and exorbitant rates forced the Confederacy to take unpopular steps to control blockade running.

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291 J. Seddon to W. H. C. Whiting, 1 January 1863. Confederate States Secretary of War, Telegrams Sent, W. H. C. Whiting to J. Seddon, 30 May 1863, Confederate States Secretary of War, Telegrams Received and J. Seddon to W. H. C. Whiting, 30 May 1863, Confederate States Secretary of War, Telegrams Sent. *Wilmington Daily Journal*, 2 September 1862, p. 2, col. 2.

292 W. H. C. Whiting to J. Seddon, 10 June 1863, Confederate States Secretary of War, Telegrams Received and J. Seddon to W. H. C. Whiting, 10 June 1863, Confederate States Secretary of War, Telegrams Sent.

293 J. A. Seddon to J. Davis, 26 November 1863, *ORA*, IV, 2, pp. 1013-1014.

Some Confederate officials recommended that the government take over all trading through the blockade. In a letter to J. P. Benjamin, Commissioner Mason related the position of Treasury Agent McRae on 5 September 1863. McRae urged that the government take over the trade and control the exportation of cotton to end the abuses caused by speculators. Mason agreed that "private enterprise seems to have adjusted trade through the blockade in such a manner as to have removed much of the risk and expense" by trans-shipping materials through ports in the west Indies and Bermuda.[294] Mason agreed that there was "nothing to prevent Government from taking this whole business into its exclusive hands" and placing control under a separate bureau in charge of naval officers.[295] Ultimately, a less extreme solution to the problem was adopted.

Both Mallory and Seddon initiated a program to impress space on privately owned vessels engaged in running the blockade. Initially, vessels were required to make one third of their cargo space available for government cargo at uniform rates set by the War and Navy Departments. The policy was neither popular nor simple to enforce. Owners of many privately operated vessels balked, threatening to withdraw their vessels from trading with the South. When North Carolina Governor Zebulon B. Vance was informed that vessels running on account of the state would not be exempt from the regulations he complained bitterly. In his opening message to the North Carolina State Legislature he remarked that "the port of Wilmington is more effectively blockaded from within than without."[296] In January 1864 he wrote Seddon that:

> It is a little remarkable to me that the entire importing operations of this State, which have been so successful and so beneficial to the cause, seems to have been met with little else than downright opposition rather than encouragement from the Confederate Government.[297]

Seddon temporarily exempted the *Don* and *Hansa* so that North Carolina's goods in Bermuda and Nassau could be shipped through the blockade. Other

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294 Richardson, James D., *A Compilation of the Messages and Papers of the Confederacy,* United States Publishing Company, Nashville, 1905, pp. 560-562.
295 *Ibid.*
296 *Wilmington Daily Journal,* 27 May 1864, p. 2, col. 2.
297 Z. B. Vance to J. Seddon, 7 January 1864, Governor's Papers, File 173, NCDAH.

southern governors joined Vance in protesting Confederate regulation of state blockade running operations.

The first legislative step in relieving the problems associated with the importation of nonessential freight was taken by the Confederate Congress in 1863. Under considerable public and military pressure Confederate legislators passed a bill prohibiting the importation of goods such as furs, antiques, coin collections, jewelry, wallpaper, bricks, glass and coconuts during the Fourth Session.[298] That same session legislators also passed "A Bill to Impose Regulations Upon the Foreign Commerce of the Confederate States to Provide For the Public Defense."[299] That law authorized the President of the Confederate States to promulgate regulations concerning the export of agricultural products such as cotton, tobacco, rice and sugar or naval stores.[6015] A circular, issued by Secretary of the Treasury C. G. Memminger and Secretary of War Seddon on 5 March 1864, identified regulations designed to control commerce through the blockade.[300] In addition to establishing a complex set of bureaucratic requirements the regulations required the compliance of all privately owned vessels trading with the Confederacy. Each vessel was to provide one half of the tonnage available for shipping for Confederate freight at rates set by the government. Each owner or master was also required to post a security bond in an amount equal to twice the value of the vessel.[301] Both the Confederate government and states within the Confederacy were exempted from the regulations, no doubt as a consequence of the criticism raised by North Carolina Governor Z. B. Vance.

Those engaged in blockade running were in agreement with James R. Randall's assessment that:

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[298]James M. Matthews, ed., *Public Laws of the Confederate States of America Passed at the Fourth Session of the First Congress, 1863-4*; Carefully Collated with the Originals at Richmond. Richmond: R. M. Smith, Printer to Congress, 1864, p. 179.

[299] *Op. Cit.*, p. 181, Official regulations to carry into effect the act "to impose regulations upon the foreign commerce of the Confederate States to provide for the public defense." *ORA*, IV, III, pp. 187-189 and James D Richardson, *A Compilation of the Messages and Papers of the Confederacy*, United States Publishing Company, Nashville, 1905, pp. 417-420.

[6015] J. M. Matthews, *Public Laws of the Confederate States of America*, p. 181.

[300] Richardson, *Messages and Papers of the Confederacy*, pp. 417-420.

[301] Matthews, Public Laws of the Confederate States of America, p. 181 and Official regulations to carry into effect the act "to impose regulations upon the foreign commerce of the Confederate States to provide for the public defense." *ORA*, IV, 3, pp. 187-189.

> The blockade runners swear that they will not bring in a single cargo under the present arrangement viz one-half the cargo. It is unjust and extortionate. If the Govt. does not prove successful in running its own steamers it will suffer rather than gain by such a regulation.[302]

In April Randall observed that:

> Mr. Memminger has stopped blockade running almost entirely by his exorbitant demands. Not one fifth of the vessels will return under the present regulations.[303]

Although only eight steamers entered the Port of Wilmington in April, Randall and other critics of the new regulations proved to be wrong. In a 20 December 1864 report to the Confederate House of Representatives, Jefferson Davis defended the 6 February 1864 legislation and the subsequent regulations that were enacted to control foreign commerce. Davis pointed out that:

> the withdrawal of vessels was an experiment, by a combination among their owners, on the firmness of the Government. The result proved the correctness of this view, for after various attempts to obtain increased advantages the vessels resumed their voyages.[304]

Davis based his assessment of the situation on figures from the Secretary of the Treasury and the Secretary of War that confirmed "many new steamers are understood to be on the way to engage in the trade...."[305] Davis pointed out that:

> The number of vessels which arrived at two ports of the Confederacy between the 1st of November and the 6th of December was forty-three, averaging more than one per day, and indicating no check in the trade. A further conclusive proof that the profits of this commerce under the present regulations are sufficiently tempting to secure its increase, is afforded by the fact

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302 James R. Randall to Kate Hammond, 10 March 1864. Randall Papers, Southern Historical Collection, University of North Carolina.

303 James R. Randall to Kate Hammond, 3 April 1864. Randall Papers, Southern Historical Collection, University of North Carolina.

304 Report of Jefferson Davis to House of Representatives, 20 December 1864, *ORA*, IV, 3, pp. 950.

305 *Ibid.*, and Report of G. A. Trenholm to J. Davis 12 December 1864, *ORA*, IV, 3, p. 952.

> that the shares of one of the companies engaged in it have greatly advanced in value. The shares of one company, originally $1,000 each, were selling in July last for $20,000 each, and now command $30,000. Those of another company have increased in the same period from $2,500 to $6,000; and all exhibit a large advance.[306]

Even with one half of the cargo shipped on government account, the potential for profit remained attractive. In May 1864, at least twenty-one steamers arrived in Wilmington from Nassau and Bermuda.[307] The following month Randall noted "the *Helen* the seventeenth steamer this moon, arrived last night. More on the way."[308]

In April, the *London Daily News* carried an article on the formation of a new company specifically to engage in running cargoes through the blockade to Confederate ports. According to the *Daily News* the Atlantic Trading Company was issuing £1,000 shares to raise capital in the amount of £200,000 with authorization to increase capital to £500,000. According to their prospectus:

> The Atlantic Trading Company has been formed for the purchase of first class paddle wheel steamers of light draught, great speed, and an average capacity of 800 bales of cotton, which form the basis of the business to be transacted. It is intended to employ the steamers in the Confederate States, and participating in the large profits attendant on this business. The practical experience in the trade enjoyed by the promoters, affords a guarantee of success, and they are enabled to offer the additional advantage of trading with open ports, where a full supply of the finer descriptions of cotton is obtainable, for which the light draught of the steamer is peculiarly adapted. Arrangements are being perfected with C. J. McRae, Esq., agent of the Confederate States, to carry in merchandize, and bring out on the return voyage full cargoes of cotton in exchange for supplies, or for Confederate States Cotton Loan. The first steamer will be dispatched in April, the second and third in May, the fourth in June, and the fifth in July. The vessels are in the hands of builders of celebrity, the materials of the best description, with all the modern improvements in machinery and boilers which guarantee suggests, with a guaranteed speed loaded, of 17 1/2 statute miles per hour.[309]

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306 *Ibid.*

307 Wise, *Lifeline*, pp. 238-239.

308 James R. Randall to Kate Hammond, 11 June 1864. Randall Papers, Southern Historical Collection, University of North Carolina.

309 *Wilmington Journal*, 26 May 1864, p. 5, col. 2.

The prospectus provided two financial scenarios as an inducement for potential subscribers that illustrated the range of profits that might be anticipated from investment in the Atlantic Trading Company enterprise. Those profit projections were based on a minimum of two successful runs per steamer and a more likely five successful voyages. According to their projections:

> The following sketch of accounts shows the amount of capital required and probable results: Expenses---Five paddle steamers, £25,000, outfits, £10,000; appropriation for purchase of cotton loan bonds (and) merchandize, £40,000; reserved for additional steamers, £25,000. Total £200,000. Results of two successful trips, 8,000 bales of cotton, 450 pounds each, sold in Liverpool to net 2s per lb. free of all charges and commissions, £360,000; freight charged by steamers between neutral ports and Confederacy, say £4,000 per voyage, £50,000-£416,000; less working expenses between neutral port and Confederacy, £30,000. Total £380,000. Allowing, as above for only two successful trips of each vessel, the profits realized will amount to £150,000.
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> This calculation, however, may be considered the least favorable one that should be taken. The rule of vessels of the class to be employed by the company may be computed as worth five trips each, with the following result: 20,000 bales of cotton, net in Liverpool, £900,000; freight earned between neutral ports and Confederacy, £120,000; less working expenses; five steamers, each five trips, at £3,000, £75,000; cost of steamers, outfit, merchandize, cotton loan, &c., £200,000; profit £750,000.[310]

In spite of regulations that made it appear, at least initially, that the Confederacy would initiate another highly effective blockade like the quasi-embargo, not one individual, joint stock company or commercial firm abandoned their blockade running enterprises. John Fraser and Company and Fraser, Trenholm and Company continued to run their steamers *Bendigo, Spunkie, Lucy* and *Heroine* into Wilmington from Nassau and occasionally Bermuda until *Bendigo* was run ashore and burned at Lockwoods Folly Inlet in January and *Spunkie* was driven ashore on Oak Island west of Fort Caswell in February 1864. A boarding party from the USS *Fahkee* found that the *Bendigo*

310*Ibid.*

had been completely unloaded and the vessel scuttled and set afire.[311] Like *Bendigo*, the cargo of the *Spunkie* had been unloaded by the time the vessel was discovered.[312]

The more successful *Lucy* was captured in November of that year. *Heroine* was sent to operate in the Gulf of Mexico during the summer and was trapped in the harbor at Mobile in August.[313] For a number of reasons including the fact that Alfred Trenholm resigned to become Confederate Secretary of the Treasury, the John Fraser and Fraser, Trenholm and Company firms gave up their dominant position in the trade and initiated a significant reduction in the level of their vessel operations.

When War Department negotiations with the Mercantile Trading Company operated by Edwin P. Stringer and Edward Pembroke failed to produce an agreement to develop a new line of steamers, Fraser, Trenholm and Company agreed to furnish eight vessels.[314] Contracts with Jones, Quiggin and Company for two vessels, *Bat* and *Owl*, being constructed for Fraser, Trenholm and Company were immediately transferred to Confederate control. Fraser, Trenholm and Company also agreed to pay for two vessels, *Stag* and *Deer*, ordered from the same Liverpool firm by James Bulloch.[315] Four additional vessels, *Albatross*, *Lark*, *Penguin* and *Wren* were to be built by Laird and Sons. Arrangements were also made with John K. Gilliat to finance six additional steamers from Jones, Quiggin and Company using funding from the Erlanger cotton bonds.[316]

The *Owl*, first of the Jones, Quiggin and Company steamers to be delivered, made its maiden run into Wilmington in late August 1864 and was turned over to the Confederate War Department in December.[317] The *Bat* was captured attempting to run into Wilmington in October and the *Stag* was captured after running into the Cape Fear River in January 1865, following the

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311 S. P. Lee to G. Welles, 4 January 1864, *ORN*, I, 9, pp. 385-386.
312 J. M. Frailey to S. P. Lee, 17 February 1864, *ORN*, I, 9, pp. 472-473.
313 Wise , *Lifeline*, pp. 304, 310 and 321.
314 C. J. McRae to J. A. Seddon, 4 July 1864, *ORA*, IV, 3, pp. 525-529.
315 *Ibid.*, Consular Dispatch, Liverpool, 28 July 1865, Reel 32 and *Liverpool Daily Post*, "Ship Launches on the Mersey,"15 December 1864 and *The Engineer*, 15 July 1864, p. 48, col. 1.
316 *Liverpool Daily Post*, "Ship Launches on the Mersey", 15 December 1864.
317 *Ibid.*

fall of Fort Fisher.[318] Fraser, Trenholm and Company also placed the *Hope* in operation in August and *Colonel Lamb* in November. While the *Hope* was captured enroute to Wilmington in October, *Colonel Lamb* was never captured and ultimately returned to England following the war.[319]

As it was clear that the Jones, Quiggin and Company and Laird and Sons vessels would take valuable time to deliver, Confederate agents McRae, Bayne and Bulloch extended the contract with Crenshaw and Company. In May 1864, Crenshaw put the *Mary Celestia* in service between Bermuda and Wilmington. Although Francis Middleton complained about the *Mary Celestia*'s seakeeping qualities, the vessel ran successfully until September when a Bermuda pilot ran the ship on the reefs south of Gibbs Hill Lighthouse.[320] In September and October Crenshaw added the *Agnes E. Fry* and the *Armstrong* to help meet his Confederate contract obligations and replace the *Mary Celestia*. Both of those vessels ran until December when the *Armstrong* was captured and the *Agnes E. Fry* was forced ashore and destroyed on Oak Island west of Fort Caswell.[321]

Alexander Collie and Company weathered criticism associated with the earlier loss of vessels partially owned by the Confederacy and continued to operate blockade runners throughout 1864. Under the Collie and Company contract with the State of North Carolina, the firm operated the *Hansa, Don* and *Annie*.[322] While the *Hansa* survived the war, the *Don* was captured off Beaufort in March 1864. The *Annie* operated quite successfully from March 1864 until the vessel was run aground and captured at New Inlet on 1 November 1864. Collie and Company also operated the steamer *Index* from January until June 1864, when the vessel was returned to England due to insufficient speed.

Although the *Index* proved to be dangerously slow, the faster screw steamer *Edith* was briefly successful for Collie and Company and made four round trips between Wilmington and Nassau or Bermuda before being sold to

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318 D. L. Braine to G. Welles, 10 October 1864, *ORN*, I, 10, pp. 547-548 and D. D. Porter to G. Welles, 20 January 1865, *ORN*, I, 11, pp. 618-620.

319 W. O. Lundt to G. Welles, 23 October 1864, *ORN*, I, 10, p. 593.

320 D. M. Anderson, "Family Letters of My Great-Grandfather." *The Bermuda Historical Quarterly*, Spring 1966, Vol. 12, pp. 98-119 and D. D. Porter to G. Welles, 9 December 1864, *ORN*, I, 11, pp. 136-137.

321 W. H. C. Whiting to Pinkney, 28 December 1864, *ORN*, I, 11, p. 787.

322 D. H. Hill, *Bethel to Sharpsburg*, p. 350., P. G. Watmough to D. D. Porter, 1 November 1864, *ORN*, I, 11, pp. 31-32 and S. P. Quackenbush to S. P. Lee, 4 March 1864, *ORN*, I, 11, pp. 524-525.

the Confederacy for use as a raider. In July, Collie and Company put the first of four Randolph, Elder and Company steamers into service to support the Confederate contract. That vessel was the *Falcon*. The following month the *Flamingo* and *Ptarmigan* were put in service. All three ships survived the war. Only the fourth vessel, *Condor,* was lost. On her maiden voyage to Wilmington the ship was run aground on Caroline Shoals and became a complete wreck before Confederate salvors could refloat the ship.[323]

The Anglo-Confederate Trading Company also increased their blockade running operations at Wilmington in 1864. After the *Banshee* was captured in November 1863, the company put *Wild Dayrell,* a second Jones, Quiggin and Company steamer, in service. *Wild Dayrell* appears to have made only one successful trip into Wilmington in January before being run ashore and destroyed in Rich's Inlet on 1 February 1864.[324] *Will of the Wisp* began making runs to Wilmington from Nassau in April and the following month *Tristram Shandy* ran into the Cape Fear. While *Will of the Wisp* was poorly constructed, the ship proved to be successful after a being put into a yard for repairs in Halifax and ran until being sold to Power, Low and Company in October 1864. The *Tristram Shandy* was captured on the first run out of Wilmington on 15 May 1864.[325]

Although the Anglo-Confederate Trading Company's losses were substantial the success of *Banshee* and *Will of the Wisp* permitted them to meet contract obligations with Power, Low and Company to deliver Confederate freight and acquire additional vessels. In September the J. & G. Thomson steamer *Wild Rover* and the *Night Hawk* began to run into Wilmington from Nassau and Bermuda. Unfortunately *Night Hawk* was run aground entering the Cape Fear on 29 September 1864.[326] After being repaired at Wilmington, the vessel was run out to Nassau in January 1865. The *Wild Rover* made successful monthly trips to Nassau or Bermuda until the fall of Fort Fisher closed the Port of Wilmington. The Anglo-Confederate Trading Company added a final vessel to their line in October 1864. That vessel was the Jones, Quiggin and Company steamer *Banshee* II. Like the *Wild Rover,*

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323 Consular Dispatch, Glasgow, 18 June 1864; Consular Dispatch, Glasgow, 8 July 1864 and Consular Dispatch, Glasgow, 30 July 1864.
324 P. Crosby to S. P. Lee, 3 February 1864, *ORN*, I, 9, pp. 438-439.
325 P. G. Watmough to G. Welles, 15 May 1864, *ORN*, I, 10, p. 60.
326 E. Kemble to O. S. Glisson, 30 September 1864, *ORN*, I, 10, p. 493.

Banshee II made successful runs first to Bermuda and then to Nassau until the Cape Fear was closed by occupation in January 1865.

The Importing and Exporting Company of South Carolina also continued to run a line of steamers. Their most successful steamer, *Fannie*, operated throughout the remainder of the war and was joined by the steamer *Alice* which ran into Wilmington until being transferred to the Gulf in August 1864.[327] The *Annie* was replaced on the Wilmington route by the William Denny steamers *Ella* in August and *Carolina* in November. The *Ella* was lost attempting to enter Old Inlet in December but, the *Carolina* survived the war to return to England in March 1865. A third vessel, *Emily*, arrived in Bermuda too late to run the blockade.[328]

Importing and exporting companies based on the South Carolina model were also formed in Virginia and Georgia. The Virginia Importing and Exporting Company was formed in 1863 and began to operate the *City of Petersburg* in December. In June 1864, the *Old Dominion* joined the *City of Petersburg*. Both vessels ran until Wilmington was closed.[329] The Importing and Exporting Company of Georgia was formed during the summer of 1864 and operated the steamers *Lilian, Little Hattie, Mary Bowers, Florie* and *Emma Henry*. The *Lilian* ran from June until her capture in August and the *Little Hattie* ran from July until Wilmington was closed.[330] The *Mary Bowers* and *Emma Henry* were less successful. The *Mary Bowers* ran into Wilmington in July but, was lost attempting to enter Charleston on 31 August 1864. *Florie* arrived in Wilmington in June 1864 and operated between Wilmington and Bermuda until October when the vessel was reported to have run aground in the Cape Fear River.[331] The *Emma Henry* made one run into Wilmington in late November but was captured on the outward voyage on 7 December 1864.[332]

A number of smaller firms and individuals also operated blockade runners out of Wilmington in 1864. One of the most successful was the *Syren* owned by the Charleston Importing and Exporting Company. *Syren* made monthly trips into the Cape Fear from November 1863 until shifting

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327 Wise, *Lifeline*, pp. 287 and 299.
328 *Ibid.*, p. 298.
329 *Ibid.*, pp. 293 and 314.
330 *Ibid.*, pp. 158-161.
331 *Ibid.*, p. 300.
332 W. E. Dennison to G. Welles, 10 December 1864, *ORN*, I, 11, pp. 182-183.

operations to Charleston in September 1864. The officers and crew of the *Syren* gained a reputation for boldness by running through the blockade in conditions like daylight or the full moon which almost all others avoided. By the fall of 1864 a single share of the firm's stock was worth $3,000, three times the amount it originally sold for in 1863.[333] The *North Heath* and *Helen* operated by Thomas Sterling Begbie for the Universal Trading Company ran between both Bermuda and Nassau and Wilmington after April and May 1864. Although the *Helen* survived the war the *North Heath* was damaged running into Wilmington in October and was ultimately sunk as an obstruction following the fall of Fort Fisher.[334] Chicora Importing and Exporting ran the *Chicora* from June until the Cape Fear was closed and the *Wando* from July until the vessel was captured after clearing Wilmington for Nassau in October 1864.[335]

After their negotiations with the Confederate War Department fell through Edwin P. Stringer and Edward Pembroke of the Mercantile Trading Company attempted to set up operations with the steamers *Nutfield* and *Pevensey*. The enterprise proved to be a disaster as both steamers were destroyed on their first attempt to run the blockade at Wilmington. The *Nutfield* was forced ashore at New River Inlet on 4 February 1864 and the *Pevensey* was forced ashore on Bogue Bank and destroyed on 9 June 1864.[336] In December, Stringer and Pembroke tried running a third steamer, the *Charlotte*. That ship made one successful round trip through the blockade at Wilmington in December before being captured in the Cape Fear River along with the *Stag* in January 1865 after the fall of Fort Fisher.[337]

The fall of Fort Fisher brought an end to blockade running through the Port of Wilmington only three months before the Confederacy collapsed. At the end of the war Confederate agents in Europe closed their operations and most returned to the South. That proved to be a disaster for most of the firm's engaged in blockade running. The firm of Fraser, Trenholm and Company was saddled with the overwhelming responsibility for £170,000 in Confederate debts. Charles K. Prioleau and James Armstrong were left to resolve the firms

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333 Price, "Blockade Running as a Business", pp. 45-46., and *Charleston Mercury*, 18 February 1864.

334 Wise, *Lifeline*, p. 314.

335 B. F. Sands to G. Welles, 21 October 1864, *ORN*, I, 10, pp. 578-579.

336 S. P. Lee to G. Welles, 14 July 1864, *ORN*, I, 10, pp. 137-138 and F. A. Roe to S. P. Lee, 4 February 1864, *ORN*, I, 9, pp. 459-460.

337 D. D. Porter to G. Welles, 20 January 1865, *ORN*, I, 11, pp. 618-620.

difficulties in the best manner possible. Although they attempted to dispose of most of the company's assets, the United States filed suit to recover Confederate property and assets. That prevented Fraser, Trenholm and Company from recovering much of what remained from their blockade running enterprise. Ultimately, they were forced to close the books on unpaid Confederate debts and in 1867 the company declared bankruptcy. Although the Charleston based John Fraser and Company struggled to recover and pay its debts, pressure from the United States Government and creditors forced the firm to declare bankruptcy in 1872.[338]

Alexander Collie and Company suffered similar consequences. With the collapse of the Confederacy, cotton owned by the State of North Carolina was confiscated and the bonds issued to finance the State's foreign commerce became completely worthless. The firm's major assets were the vessels that survived the war and Collie attempted to dispose of them to recover some company losses. Because the blockade running economy had collapsed with the Confederacy, the value of vessels built to engage in the trade fell dramatically. The *Falcon, Ptarmigan* and *Flamingo* sold for £18,000 each. When Collie closed his books on the Confederate accounts there were no profits to be distributed to investors.[339]

The Importing and Exporting Company of South Carolina, Chicora Importing and Exporting Company and the Charleston Importing and Exporting Company were all able to pay investors dividends before closing their books. The Importing and Exporting Company of South Carolina paid investors £120 per share on their stock during the war and an additional £70 after disposing of its vessels and assets in England. Both the Charleston Importing and Exporting Company and Chicora Importing and Exporting Company paid their investors dividends at the close of business in January 1865 and Chicora paid a final $100 in gold after the vessel *Chicora* and the company's remaining assets were sold. Ironically, the largest firms engaged in blockade

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338 U. S. Congress, House, Fraser, Trenholm & Company, Executive Document, No. 63, 39th Congress, 2nd Session, 1867, The United States vs. John Fraser and Company, Walker, Evans and Cogswell, Charleston, 1873, pp. 1-23 and Consular Dispatch, Liverpool, 9 & 19 May 1865.

339 Wharncliffe Manuscripts, A. Collie to Lord Wharncliffe, 28 February 1865, 3 and 7 April 1865, 25 August 1865, Edward Spence to Wharncliffe 3 January 1865, 22 July 1865, 10 February 1866, and 15 April 1868, Edward Stringer to Lord Wharncliffe, 9 April 1868.

running suffered the greatest losses as a consequence of over extending and reinvestment of company assets in supporting the Confederate cause.[340]

Anglo-Confederate blockade running at Wilmington was carried out by a variety of government agencies and private companies. Agencies of the Confederate War Department and the State of North Carolina were clearly the most aggressive, but certainly not the only government entities engaging in the trade. In spite of inevitable losses, their operations were successful. Private firms like Fraser, Trenholm and Company, John Fraser and Company, Alexander Collie and Company and William Crenshaw and Company shipped vast quantities of material on government account and also engaged heavily in commercial trading through the blockade. Despite the experience of firms like Z. C. Pearson and Company, the risks associated with enterprise were clearly acceptable and the potential benefits sufficient to maintain their interest until the very last. When the Confederacy collapsed in the spring of 1865, new blockade runners were at sea headed for Bermuda and the Bahamas and still more were under construction in the shipyards of Great Britain.

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340 Price, "Blockade Runners as a Business", pp. 31-62 and Wise, *Lifeline*, p. 224.

Chapter IV Elements of the Blockade Runners' Strategy

The strategies that evolved in association with blockade running at Wilmington were neither clearly defined nor systematically developed. They were factors of geography, politics, military strategy, technology and enterprise. Most significant perhaps is the fact that the diverse elements of Anglo-Confederate strategy evolved to produce a largely successful response to Union efforts to isolate the Confederacy.

Because the United States Navy was entirely unprepared to enforce it, President Abraham Lincoln's declaration of a blockade of Confederate ports had little initial impact on the South's foreign commerce. When the USS *Daylight* arrived and Captain Samuel Lockwood declared that the port of Wilmington was closed on 21 July 1861, the condition of that vessel and logistical requirements kept it off station so much of the time that the Cape Fear, for all practical purposes, remained open to commerce.

In addition, the two navigable entrances to the river made it impossible for the *Daylight* to be effective. The geography of the Cape Fear was a factor of North Carolina's unique and dynamic coastal environment. Since the Pleistocene Epoch that environment has consisted of a complex of low sandy barrier islands that separated the inland sounds from the Atlantic and shoals that extended seaward from three distinct capes. At the time of the Civil War the Cape Fear River emptied into the Atlantic Ocean through navigable inlets separated by the southern of those island, cape and shoal complexes (Figure 2). That semi-tropical barrier island was known as Smith Island. It formed Cape Fear, from which Frying Pan Shoals extended seaward for more than twenty miles. The primary entrance to the Cape Fear River was through Old Inlet between Smith Island and Oak Island. Although characterized by a complex of constantly migrating shoals, that entrance to the Cape Fear had served navigation since the earliest attempt to settle the Cape Fear region in the seventeenth century.

The second entrance to the Cape Fear was New Inlet. New Inlet had been formed by a hurricane in 1768. Although the inlet was not as well developed as that at Old Inlet, successful navigation of the shifting channels was possible. Although principally employed by small vessels, New Inlet offered blockade runners an important option and greatly complicated efforts

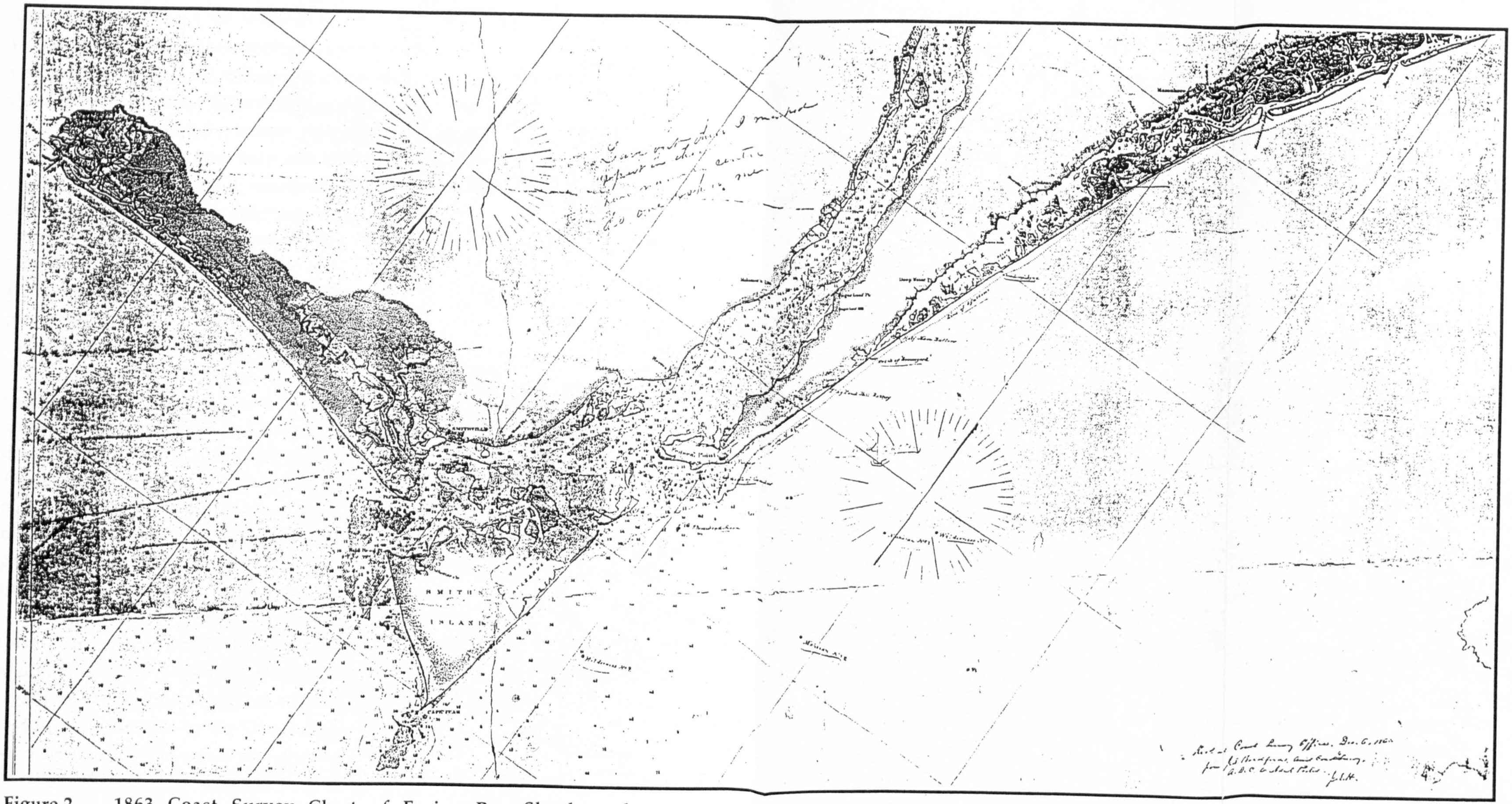

Figure 2. 1863 Coast Survey Chart of Frying Pan Shoals and the Entrances to the Cape Fear River.

to eliminate Wilmington's commerce. Initially, vessels running into the Cape Fear could determine the position of U. S. Navy vessels and run into or out of the unguarded entrance. Outbound vessels could anchor in the Cape Fear between the two inlets, observe the position of blockading vessels and run safely to sea through the unguarded inlet knowing that vessels in pursuit would have to sail around Frying Pan Shoals before giving chase. That unique geography provided important options for blockade runners that would make the Cape Fear the most difficult port to close to Confederate commerce.

It was not until September 1861, that three vessels could be assigned to enforce the blockade and only one of those was a steamer. As repairs and logistical demands almost constantly kept one or more of the vessels off station, vessels breaking the "paper blockade" had little difficulty running either into or out of the Cape Fear River. While outbound vessels used either New Inlet or Old Inlet as was convenient, most of those running into Wilmington came through Old Inlet because the guns of Fort Caswell provided protection during the critical passage through the complex of shoals between Oak Island and Smith Island.

Although the development of fortifications around the entrances to the Cape Fear River were designed to frustrate Union plans to launch the type of amphibious invasion that had proven successful at Hatteras and Beaufort, that defense system had a profound impact on the character of blockade running. The protection offered by Confederate artillery provided vessels running the blockade with a number of important options as they navigated the most critical part of their voyage. During the course of the war that protection proved to be one of the most critical elements in successfully trading through the blockade.

At the outset of hostilities in 1861, only the Old Inlet entrance to the Cape Fear was protected. The defenses of Old Inlet consisted of Fort Caswell and Fort Johnson. Fort Caswell, located on the east end of Oak Island on the west side of Old Inlet, was a classic but undeveloped masonry fortification. It had been constructed by the United States Army between 1826 and 1838.[1] Fort Johnson was a small aging fortification at the junction of the Cape Fear and Elizabeth Rivers. It had originally been constructed during the colonial period and by the nineteenth century was used more as command center than a

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1 Ethel Herring and Carolee Williams, *Fort Caswell in War and Peace*, Broadfoot, Wendell, N. C., 1983, pp. 9-31.

fortification.[2] When North Carolina Governor Ellis ordered the forts seized in January 1861, they were each occupied by a single sergeant responsible for maintenance.[3]

In corresponding with Georgia Governor Joseph E. Brown, Governor Ellis confirmed that:

> The U. S. forts in this state are indefensible. The armament is incomplete and of a very ordinary kind. The best fort, Caswell, has, indeed but two serviceable guns and they of light caliber.[4]

Shortly after North Carolina troops occupied forts Caswell and Johnson, Governor Ellis appointed Major William Henry Chase Whiting of the Confederate Army to command North Carolina's coastal defenses. By the end of April 1861, Major Whiting had begun to strengthen the Cape Fear defense system.[5] Within less than a month Whiting had been able to obtain and mount 21 cannon on the parapets of Fort Caswell and sand and sod were being piled against the masonry walls to resist explosive ordnance. To carry the weight of heavier ordnance, the casemates were reinforced with heavy timber and railroad iron.[6] By October the *Wilmington Journal* was confident enough to assert that the guns of Fort Caswell could blow any Yankee fleet back into the sea "quicker than chain lightening could run round a turnip patch."[7]

Initially, Captain Charles P. Bolles was ordered to assist Major Whiting in strengthening the existing fortifications and secure more modern ordnance for their defense.[8] As chief engineer, Captain Bolles' first assignment was the construction of batteries at Confederate Point (previously Federal Point) to defend New Inlet. In May, Bolles' replacement, Captain William L. DeRosset mounted two 24-pdr cannon in the earthwork fortifications before turning

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2 Bill Reaves, *Southport (Smithville) and Environs*, Vol.1, The Southport Historical Society, 1978; pp. 3-6.

3 *Ibid.*, p. 58.

4 *Ibid.*, p. 59.

5 Headquarters, Provisional Forces, Wilmington, North Carolina. General Orders No. 1, 22 April 1861. Chapter II, Volume 331. Military Departments. Letters sent, North Carolina April-May, 1861. Record Group 109, NA.

6 Ethel Herring and Carolee Williams, *Fort Caswell in War and Peace*, Broadfoot, Wendell, N.C., 1983, pp. 9-31.

7 *Wilmington Journal*, 22 October 1861.

8 Bolles, Charles, Bolles Papers. NCDAH, Raleigh, N. C.

continued development of the defenses over to Captain John J. Hedrick.[9] Hedrick worked to expand and strengthen the fortification which was renamed for Colonel Charles F. Fisher of the 6th North Carolina Regiment, who had been killed during the first battle at Manassas.[10] Under Captain Hedrick's supervision the Confederate Point fortifications were constantly expanded. Although still only a series of earthwork gun emplacements constructed of sand, they formed the number "7" shape that would characterize what was to become the largest and most powerful fortification of its type in the world.[11]

Colonel William L. Lamb took command of Fort Fisher on 4 July 1862. Following a tour of his new command he described the works as:

> Situated at the extreme left of the works facing the sea, with its rear close to the river shore was the recently erected Shepherd's Battery with two guns. Next, toward the ocean was a quadrilateral field work known as Fort Fisher. Constructed partially out of perishable sand bags, it was a small work--its longest face was only about 100 yards. It housed four guns but only two eight-inch Columbiads were suitable for seacoast defense. To the right of the Fort Fisher facing the sea was a well constructed casemated battery known as Meade's Battery. It contained four eight-inch Columbiads and was constructed of turfed sand over a heavy timbered framework, the embrasures made of palmetto. A one-gun battery, Cumberland's Battery, was situated to the right of Meade's and protruded well out on the seashore. This emplacement contained a long-range, rifled gun. Two hundred yards to the right and rear of this were two batteries, Hedrick and Bolles, each having two guns of large caliber in barbette. In addition to the gun emplacements, there was a large commissary bombproof.[12]

Nevertheless, Colonel Lamb knew the works and ordnance were completely inadequate and "amounted to nothing" as a "defense of New Inlet against a Federal fleet."[13]

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9 *Ibid.* and Honeycutt, A., "Fort Fisher, Malacoff of the South". M.A. Thesis, Department of History, Duke University, 1964.

10 William Lamb, "Fort Fisher" manuscript on file, Historic Sites, NCDAH, *Wilmington Morning Star*, 15 July 1881.

11 William Lamb, "Fort Fisher," 1864.

12 *Ibid.*

13 William Lamb, "Battles of Fort Fisher," Southern Historical Society Papers, Vol. 21, p. 260; Lamb, "Story of Fort Fisher", p. 2.

To remedy the situation, Lamb immediately began to strengthen the fortification. That work was carried out by the garrison under Lamb's command and by slaves and free negros. The North Carolina General Assembly had approved the impressment of slave labor for the construction of fortifications along the lower Cape Fear in December 1862.[14] At times several hundred were engaged in construction of Fort Fisher.[15]

At the suggestion of Brigadier-General W. H. C. Whiting, the land face of the fort was substantially reinforced. From Shepherd's Battery on the Cape Fear River marsh to the bastion named Fort Fisher in 1862, a 23-foot high rampart was constructed over a series of bombproof shelters and magazines.[16] The top of the land face contained sixteen gun emplacements each separated by a nine foot high traverse to provide protection from enfilading fire. The land face gun chambers held 23 heavy cannon mounted in barbette. In front of the land face Lamb erected a pallisade nine feet high and buried a series of electrically detonated sub-terra torpedoes.[17]

Lamb also enlarged and strengthened the northeast bastion that was originally designated Fort Fisher. The redesigned 32-foot high fortification mounted two heavy guns, one 8-inch Columbiads and one 8-inch Blakely rifle. Like the land face they were mounted in barbette and protected from enfilading fire by traverses. South of the northeast bastion a 100 yard long four gun emplacement similar to the land face was constructed. A crescent shaped emplacement originally built for casemated guns was converted into a bombproof hospital. The remainder of the 1,300 yard sea face of the fort consisted of a series of eight self contained batteries mounting eighteen pieces of heavy ordnance including a 150-pounder Armstrong rifle.[18] Those batteries were connected by a trench and berm of sand designed to facilitate movement and communication between the batteries and protect riflemen.

At the south end of the sea face, Lamb constructed a mound of earth more than fifty feet high. To speed construction Lamb built a frame tower and incline plane. A cart that carried sand was pulled up tracks on the incline plane

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14 Robert Iobst, "Fort Fisher: A Study". unpublished M.A. Thesis, Department of History, University of North Carolina, Chapel Hill, 1962 and A. Honeycutt, "Malakoff of the South," 1964.

15 Iobst, Fort Fisher, 1962.

16 Gordon Watts, "Excavation of a Fort Fisher Bombproof," NCDAH, 1981.

17 Lamb, "Battles of Fort Fisher," p. 260; Lamb, "Story of Fort Fisher," p. 2.

18 *Ibid.*

by small steam engines. At the top of the ramp the cart was positioned inside the tower and each load was dumped to build the mound. When completed "the Mound", or Battery Lamb as the works was officially designated, was visible for miles along the coast and was fitted with signal lights for vessels running the blockade and two heavy guns to protect New Inlet.[19]

New Inlet was also protected by Battery Buchanan on the north side of the inlet and an emplacement on Zeek's Island on the south side. Battery Buchanan was an elliptical earthwork that mounted four heavy guns, two of which were 150-pounder Blakely rifles.[20] Battery Buchanan was also designed to serve as a "citadel" of last resort in the event that the garrison of Fort Fisher was forced to retreat from the northern works.[21] The fortification on Zeek's Island was a "small open battery mounting two or three guns."[22]

In addition to Fort Fisher, Confederates under Colonel Lamb's command constructed a series of small earthwork fortifications above Fort Fisher. Those batteries were to serve two purposes. They would provide a first line of defense against any landing of Union troops and also provide protection for vessels running down the coastline. Flag Pond Battery was constructed adjacent to a small pond approximately four miles north of Fort Fisher. Battery Gatlin was located three miles farther north near the southern extremity of Masonboro Sound. Both batteries were reported to have two guns each.[23] Along the beach a series of unoccupied earthworks were constructed to protect a Whitworth field piece that was transported up and down the beach as needed to provide protection for vessels run ashore.[24]

A similar complex of fortifications also protected the Old Inlet and the Western Bar Channel. By mid-May 1863, Captain Charles Boggs of the USS *Sacramento* reported that work on Fort Caswell had apparently been almost completed. In describing the works Boggs stated that:

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19 *Ibid.*

20 Honeycutt, Malakoff of the South, Lamb, "Battles of Fort Fisher," p. 260 and Lamb, "Story of Fort Fisher," p. 2.

21 Lamb, "Story of Fort Fisher", p. 2 and Lamb Manuscript, 1864.

22 S. P. Lee to G.Welles, 8 September 1864, *ORN*, I, 10, 441-444 and W. A. Parker to S. P. Lee, 28 November 1863, ORN, I, 9, pp. 329-331.

23 S. P. Lee to G. Welles, 8 September 1864, ORN, I, 10, pp. 441-442.

24 A. L.Case to S. P. Lee, 3 June 1863, *ORN*, I, 9, pp. 57-58.

It presents to us the appearance of impregnability from assaults by ironclads or land batteries. All the guns of the main work are casemated; covered with at least two thicknesses of railroad iron, backed with palmetto logs. The original work has been faced with 15 feet of sand. The eastern face of the fort appears to be (even between the casemates) ironclad; and the sand hills for a distance of 2 1/2 miles to the westward of the fort have been plowed up and leveled, leaving no cover for an advance on that side.[25]

Ultimately Fort Caswell was to be armed with sixteen guns and a mortar battery.[26]

Confederate defenses equipped with long range artillery were also constructed on Oak Island west of Fort Caswell. The most complex and powerful was an earthwork fortification named Fort Campbell approximately half way between Fort Caswell and Lockwoods Folly Inlet. Although smaller than Fort Caswell, Fort Campbell was a "heavy casemated battery" equipped with rifled ordnance. It was positioned to command the Western Bar and provide protection for blockade runners navigating the entrance to Old Inlet. In August 1863, S. P. Lee reported that an additional fortification was being constructed on Oak Island between Fort Caswell and Fort Campbell. He speculated that it might be "a huge mound, to mount heavy, long-ranged guns, like the Mound now completed and the one building, both just west of Fort Fisher, on Federal Point, New Inlet entrance."[27] That single gun emplacement became Battery Shaw.[28] The Oak Island defenses were additionally reinforced by a battery of Whitworth guns that were transported along the beach and set up in a series of earthwork emplacements similar to those north of Fort Fisher.[29]

In order to better defend Old Inlet and provide some assurance that a Union force would not be landed on Smith Island, an earthwork fortification was constructed. In May 1863, Captain Boggs reported that earthworks were also being constructed on Smith Island near the Bald Head Lighthouse. He warned that "Smith's Island is the key of the position, and if allowed to perfect

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25 C. S. Boggs to S. P. Lee, 14 May 1863, *ORN*, I, 9, pp. 21-22 and S. P. Lee to G. Welles, 8 September 1864, *ORN*. I, 10, pp. 441-444.

26 Herring and Williams, *Fort Caswell in War and Peace*, pp. 9-31.

27 S. P. Lee to G. Welles, 26 August 1864, *ORN*, I, 9, pp. 182.

28 Herring and Williams, *Fort Caswell in War and Peace*, pp. 9-31.

29 S. P. Lee to G. Welles, 8 September 1864, *ORN*, I, 10, pp. 441-442.

their defenses there no human means can dislodge them."[30] By 1864, those earthworks had been developed into Fort Holmes, a heavy fortification on the point of Bald Head on the southwest point of Smith Island. Under the command of General Hebert, the fortification was expanded to consist of a complex of batteries and earthworks that extended from Bald Head Point approximately 1 $^{1}/_{2}$ miles east along the south beach and north across the island to Light House Creek. When Colonel Lamb visited Fort Holmes in November 1864 he was impressed with the strength of the eleven gun works.[31]

With the construction and arming of the fortifications at New and Old Inlet, vessels on the blockade were obliged to maintain stations and break off their pursuit at a respectable distance offshore. Initially, the smoothbore ordnance of Fort Caswell and Fort Fisher did not have sufficient range to drive Union vessels away from the inlets or the forts. In fact, the early construction of fortifications to protect New Inlet was periodically interrupted when Union vessels shelled the Confederate positions. The problem was initially solved by rifling old 32-pdrs using equipment shipped from Charleston to Wilmington.[32]

The steadily increasing strength of Confederate fortifications defending New Inlet was also occasionally and effectively illustrated for the Union fleet. On 22 June, 1863, at 4:30 a.m., the USS *State of Georgia* was struck and badly damaged by a Whitworth rifle bolt weighing 120 pounds.[33] Fort Fisher was ultimately equipped with more than forty heavy pieces of ordnance that included a rifled 130-pounder Armstrong and a 170-pounder Blakely rifle brought through the blockade. Fort Caswell also received one of the 170-pdr Blakely rifles.[34]

On 21 February 1863, James Trathen, captain of the USS *Mount Vernon,* reported that a lead colored screw steamer ran in "under the guns of Fort Fisher" and was lost in the darkness. At daylight the following morning the vessel was discovered offshore of the fort. Before guns could be brought to bear, the steamer ran through New Inlet and anchored in the Cape Fear

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30 C. S. Boggs to S. P. Lee, 14 May 1863, *ORN*, I, 9, pp. 21-22.

31 William Lamb Diary, 9 November 1864 and Memorandum for Lieutenant-Colonel Frobel from W. H. C. Whiting, 8 September 1863 and *ORA*, I, 29, II, pp. 705.

32 "Reminiscences of the Lower Cape Fear," *Wilmington Morning Star*, 26 September 1873.

33 J. F. Armstrong to A. L. Case, 22 June 1863, *ORN*, I, 9, pp. 78-79.

34 Liverpool Consul, Reel 23, 11 January 1863; Bermuda Consul , Reel 6, 3 February 1863; Vessel Papers, Reel 22, *Merrimac* and W. H. C. Whiting to D. H. Hill, 25 April 1863, *ORN*, I, 8, pp. 871-872.

River.[35] In reporting on the situation off New Inlet in March 1863, Commander A. L. Case of the USS *Iroquois* reported that "the batteries are so numerous that we can do but little, if anything, after they are once by us."[36] On 15 June, Case reported that he had identified a total of thirteen fortifications in the vicinity of New Inlet. During the summer of 1863, three of the five north of Fort Fisher were reoccupied and communicated with Fort Fisher concerning both blockade runners and the union fleet.[37]

On February 1863, Commander A. Ludlow Case summed up the situation off New Inlet in a letter to S. P. Lee. Case deduced that:

> As the vicinity of the inlet is now covered by the new batteries, I think our chief hope of success in preventing the inward violation of the blockade will be in finding the vessels farther away.[38]

For vessels running the blockade, Confederate ordnance frequently made a critical difference between success and failure. The size and range of Confederate ordnance at Fort Holmes, Fort Caswell and Fort Fisher provided a critical "pocket" of protection at New and Old Inlet.[39] The Whitworth rifles from the *Modern Greece* and others subsequently shipped through the blockade provided the means to extend that protection along the beaches adjacent to New and Old Inlet.

Although of much smaller caliber, rifled 12-pounder Whitworth field pieces recovered from the wreck of the *Modern Greece* in July 1862, provided Fort Fisher and Fort Caswell with ordnance of much greater range and higher accuracy.[40] Rifled Whitworth guns placed in Fort Campbell surprised the USS *Maratanza* with a shell through the port quarter on the morning of 11 October 1862. Commander Scott of that vessel reported that projectiles from the battery passed over his ship at a range of 4.5 miles and confirmed that it was no longer

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35 J. Trathen to A. L. Case, 21 February 1863, *ORN*, I, 8, pp. 547-548.
36 A.L. Case to S. P. Lee, 12 March 1863, *ORN* I, 8, p. 599.
37 A. L. Case to S. P. Lee, 15 June 1863, *ORN* I, 9, p. 75.
38 A. L. Case to S. P. Lee, 21 February 1863, *ORN*, I, 8, pp. 547-548.
39 P.G. Watmough to D. D. Porter, 15 November 1864, *ORN*, I, 11, pp. 66-67.
40 Walter Clark, *Histories of the Several Regiments and Battalions from North Carolina in the Great War, 1861-1865*. (5 Volumes) State of North Carolina, Raleigh and Goldsboro, 1901; D. L. Braine to G. H. Scott, 22 September 1862, *ORN*, I, 8, p. 88 and J. F. Armstrong to L. M. Goldsborough, 19 August 1862, *ORN*, I, 7, p. 659.

safe to assume stations 2.5 miles from Old Inlet.[41] Those guns provided Confederate defenders of the Cape Fear with highly mobile artillery. Those flying batteries were used to extend the protection of Confederate artillery as far north of Fort Fisher as Masonboro Inlet and as far west of Fort Caswell as Lockwoods Folly Inlet. In November 1862, those Whitworth rifles were used to drive blockade ships away from the wreck of the British bark *Sophie* of Liverpool which was run ashore south of Masonboro Inlet and burned by a boarding party from the *Mount Vernon*.[42]

Late in the afternoon of 14 January 1863, the USS *Columbia* grounded near Masonboro Inlet and was driven ashore before assistance could be summoned. On the morning of 16 January a southeasterly gale drove the vessel closer in to shore. The guns had hardly been spiked and thrown overboard and the foremast cut away when Confederates set up a Whitworth battery on the beach and drove off the USS *Cambridge* and USS *Penobscot* attempting to assist the crew of the stranded USS *Columbia*.[43]

In March 1863, Brigadier-General Whiting wrote Major-General D. H. Hill to justify leaving the Whitworth guns at Fort Fisher and Fort Caswell. According to Whiting:

> The Whitworth guns are all we have to depend on to keep the blockaders at such a distance as will enable the steamers to run the blockade. One is at [Fort] Caswell, one at Fort Fisher, and one about 5 miles above [Fort] Fisher, on the beach. We have now four British and one Confederate steamers in port daily expecting to leave and several steamers are expected to arrive. We have had an engagement with the enemy over each one of these vessels, the enemy's sloops of war fiercely attacking the forts, while their smaller vessels attempt to cut off the steamers. This has happened at both forts. Without the disposition alluded to at Fort Fisher we should have lost the *Cornubia* inevitably three days ago. She had been thrice chased off the coast and became short of coal. Running into the land at Masonboro, she communicated with Colonel Lamb, and the disposition being offered, boldly made for the bar, a fleet of five vessels firing into her. She had the most valuable

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41 Commander G. H. Scott to S. P. Lee, 11 October 1862, *ORN*, I, 8, p. 127 and S.P. Lee to G. Welles, 27 October 1862, *ORN*, I, 8, pp. 152-153.

42 J. Trathen to W. A. Parker, 5 November 1862, *ORN*, I, 8, p. 194, A. E. Barnett to J. D. Warren, 5 November 1862, *ORN*, I, 8, p. 195, J. D. Warren to W. A. Parker, 5 November 1862, *ORN*, I, 8, p. 197-198 and T. M. Peakes to G. Welles, 2 December 1862, *ORN*, I, 8, p. 199.

43 J. S. Williams to S. P. Lee, 21 January 1863, *ORN*, I, 8, pp. 423-424.

> cargo of powder and arms she has yet brought. Under these circumstances, unless for a matter of greater and pressing importance, I should not like to take the responsibility of detaching the gun from the coast defense.[44]

In July, Whitworth rifles were used to defend the twin screw steamer *Kate*, which was run aground on the east beach on Smith Island in July 1863.[45] Under the protection of those field pieces, Confederates refloated the *Kate* and towed the steamer toward New Inlet. In spite of accurate and intense fire from Armstrong and Whitworth guns on Smith Island, the *Mount Vernon* was able to drive the salvage crew away.[46]

Unfortunately for vessels running the blockade, the Whitworth batteries at Fort Fisher were captured during a skirmish over the screw steamer *Hebe*. That vessel was run ashore north of Fort Fisher in August 1863 and a boarding party from the USS *Niphon* attempted to destroy the vessel. Union warships and Confederate artillery fought a heated action over the wreck until two valuable Whitworth field pieces were captured by a landing party from the USS *Minnesota*.[47] Following the loss of the Whitworth rifle during the *Hebe* skirmish, Whiting wrote Secretary of War Seddon that:

> I have met with a serious and heavy loss in that Whitworth, a gun that in the hands of the indefatigable Lamb has saved dozens of vessels and millions of money to the Confederate States. I beg that a couple of the Whitworth guns originally saved by him from the *Modern Greece* may be sent here at once. Their long range makes them most suitable for a seaboard position. Could I get them with horses we could save many a vessel that will not be lost to us.[48]

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44 W. H. C. Whiting to D. H. Hill, 6 March 1863, *ORN*, I, 8, pp. 860-861.

45 A. L. Case to S. P. Lee, 13 July 1863, *ORN*, I, 9, pp. 120-121; S. P. Lee to G. Welles, 28 July 1863, *ORN*, I, 9, p. 121 and J. E. De Haven to A. L. Case, 12 July 1863, *ORN*, I, 9, p. 122.

46 S. P. Lee to G. Welles, 6 August 1863, *ORN*, I, 9, p. 142; A. L. Case to S. P. Lee, 2 August 1863, *ORN*, I, 9, pp. 142-143 and J. Trathen to S. P. Lee, 3 August 1863, *ORN*, I, 9, pp. 143-144.

47 S. P. Lee to G. Welles, 24 August 1863, *ORN*, I, 9, pp. 165-166; J. B. Breck to A. L. Case, 18 August 1863, *ORN*, I, 9, pp. 165-166; J. B. Breck to A. L. Case, 18 August 1863, *ORN*, I, 9, pp. 166-167; P. Crosby to S. P. Lee, 8 September 1863, *ORN*, I, 9, pp. 170-171 and W. H. C. Whiting to J. A. Seddon, 24 August 1863, *ORN*, I, 9, pp. 173-174.

48 W. H. C. Whiting to J. A. Seddon, 24 August 1863, *ORN*, I, 9, pp. 173-174.

After the *General Beaureguard* was forced ashore on 11 December 1863, the *Howquah* and *Tuscarora* returned to destroy the wreck. Both Flag Pond Battery immediately south of the wreck and Battery Gatlin to the north opened fire on the Union steamers and drove them away. Apparently Whiting's request for Whitworth rifles was fulfilled. On 10 February 1864, a Whitworth battery opened fire on the USS *Florida* as that vessel was attempting to pull off the blockade runner *Fanny and Jenny* at Masonboro Inlet. Instead of moving the Whitworth up the beach where the guns were exposed to capture, Confederate artillerists moved the gun up a road cut along the western side of Masonboro Sound. The Confederate fire proved to be highly accurate in spite of the long range and shots hit the USS *Florida* so consistently that the vessel was obliged to abandon the *Fanny and Jenny* and pull offshore.[49] Commander Crosby reported that "the precision of the enemy's fire with those guns is very remarkable."[50]

The Whitworth guns from Fort Caswell were also used to frustrate Union efforts to salvage blockade runners that were forced ashore. The steamer *Bendigo* was discovered at Lockwoods Folly Inlet on 3 January 1864. Union efforts to refloat the *Bendigo* not only failed but the gunboat *Iron Age* was lost in the attempt. A battery of rifled ordnance brought down the beach from Fort Caswell was used to disrupt the Union salvage attempt.[51] Less than two weeks later, early on the morning of 20 January 1864, the North Carolina steamer *A. D. Vance* ran aground on the Western Bar attempting to run into Wilmington. The vessel remained aground for four days before being pulled off and towed into the Cape Fear. Salvage operations on the *A. D. Vance* were "well protected by the batteries of Fort Caswell and Bald Head."[52] Efforts to salvage the steamer *Spunkie,* which ran aground west of Fort Caswell in February were also well protected but tugs dispatched from Wilmington could not pull the blockade runner off before weather deteriorated and the hull broke up in the surf.[53] During the summer night of 2 June of 1864, the *Georgiana McCaw* was chased aground on Oak Island. Although boats from the USS

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49 P. Crosby to S.P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474.

50 P. Crosby to S.P. Lee, 11 February 1864, *ORN*, I, 9, pp. 474-476.

51 S.P. Lee to G. Welles, 8 September 1864, *ORN*, I, 10, pp. 441-444.

52 S. P. Lee to G. Welles, 6 February 1864, *ORN*, I, 9, p. 413.

53 J. M. Frailey to S. P. Lee, 13 February 1864, *ORN*, I, 9, p. 472 and J. M. Frailey to S. P. Lee, 17 February 1864, *ORN*, I, 9, pp. 472-473.

Victoria captured 29 of the officers and crew of the blockade runner, "at daylight Fort Caswell and the adjacent batteries opened fire on our boats with shot and shell, which compelled them to return without accomplishing her destruction."[54] In December 1864, the steamers *Ella* and *Agnes E. Fry* were chased aground attempting to enter Old Inlet and Confederate artillery frustrated Union efforts to destroy both vessels. The *Ella*, aground on Marshall Shoal, was under the guns of both Fort Caswell and Fort Holmes. The *Agnes E. Fry* was chased ashore on Oak Island near the remains of the *Georgiana McCaw* and "rapid firing from shore batteries chased the *Eolus* and *Monticello* away as soon as daylight revealed their positions." One of the Whitworth bolts "passed through the paymaster's office and cut off the rim and one of the arms of the starboard wheel."[55]

Development of Confederate defenses along the Cape Fear provided an expanding pocket of protection for vessels running the blockade. As the blockade tightened, that played an increasingly critical role in the success of vessels engaged in the trade. That protection also had an impact on the strategies adopted by Anglo-Confederate blockade runners.

In 1861 and 1862, the tactics employed by blockade runners were both simple and effective for running in and out of the Cape Fear. Schooners, a few sloops and brigs and the occasional steamer made up the overwhelming majority of all vessels engaged in blockade running at Wilmington in 1861 and 1862.[56] Fore and aft vessels were fast to windward and from their anchorage could select their most advantageous "airs" and tides and put to sea when blockade ships were in their lee. Brigs, barks and the occasional ship that performed best off the wind could select channels, "airs", tides and conditions that provided a downwind advantage. Frequently, more than one vessel would put to sea at the same time thus significantly reducing the possibility of being chased.

When blockade vessels left their stations in pursuit of one vessel, others were unrestrained. A Union naval officer noted that:

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54 A. Everson to M. Haxtun, 2 June 1864, *ORN*, I, 10, pp. 114-115.

55 Abstract log of the USS *Eolus*, 27 December 1864, *ORN*, I, 11, p. 385.

56 Marcus W. Price, "Ships that Tested the Blockade of the Carolina Ports, 1861-1865." *American Neptune*, Vol. XV, April 1948, p. 222.

> If the vessels were captured, even in entering principal ports it was due rather to the stupidity of the persons attempting to run the blockade than to the effectiveness of the force employed to prevent it.[57]

Vessels were brought to anchor in the river so that their anchorage offered a view of the position of Union vessels guarding both Old and New Inlet. If one inlet was left unguarded because ships were away for repairs and/or resupply, it was a simple matter to sail out the unguarded inlet once environmental conditions were favorable. In the event that both inlets were guarded, vessels attempting to run out could wait at their anchorage until the weather, darkness or both offered an advantage that reduced the odds of capture to an acceptable level.

As the number of Union vessels on the blockade increased, the officers of sailing vessels departing neutral ports like Halifax, Bermuda, Nassau or Havana became very particular about clearing for another neutral port. At Halifax, Yarmouth and St. Johns, Nova Scotia vessels were cleared for the Bahamas and Havana. Conversely, vessels departing ports like Havana and Nassau were cleared for Halifax, St. Johns and Yarmouth. Clearing for neutral ports also promoted the important appearance of maintaining British neutrality. That provided some protection from capture as long as the vessels were not carrying contraband or found to be outside the normal shipping lanes on a heading for a Confederate port. Although the practice continued throughout the war, the ruse was thoroughly exposed by the fall of 1862.

Vessels running into New or Old Inlet hove to offshore to determine the positions of blockaders and attempted to time their arrival so that their run through the inlet would occur shortly after dawn. That would permit them sufficient light to navigate the shifting inlet channels safely. Because of protection offered by the forts, vessels could run through the Federal cordon at night and safely anchor under the guns of the forts until daylight. With visibility, blockade runners could then make their way safely across the bar. Timing was, however, a critical issue.

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57 Daniel Ammen, *The Navy in the Civil War: The Atlantic Coast.* Charles Scribners Sons, New York, 1898, p. 11.

Steamers had a distinct advantage in that they could operate independently of the winds. Sailing vessels on the blockade offered no real threat to steam powered blockade runners. The first steam vessels to run the blockade at Wilmington simply steamed in or out the most convenient inlet. Most, like the *North Carolina,* were never observed and few were chased. During 1861, only the wooden side-wheel steamer *Theodora* ran the blockade into Wilmington from Nassau on 20 December. That inward voyage and the subsequent departure of the *Theodora,* on 1 May 1862, were unobserved by Union vessels. Due to the sporadic presence of the United States Navy vessels, neither the *North Carolina* (*Annie Childs*) nor the *Nashville* (*Thomas L. Wragg*) were observed making passages in February, April and May 1862. The inconsistent nature of the blockade required little, save caution and observation of the stations that were being kept by Union vessels, to assure success in a steamer.

With the increase in Union vessels on station off the Cape Fear during the summer of 1862, a slightly different tactic was adopted. Rather than running boldly through the "paper" blockade in the daylight without sighting a United States vessel, the *Gordon, Modern Greece* and *Sunbeam* arrived off the Cape Fear during the previous day or night. Like many of the sailing vessels engaged in the trade, they waited offshore gauging their approach to the bar for morning when visibility decreased the risk of navigating the inlets.[58] Apparently, no system of range lights had been developed for the Cape Fear and running across the bar at night was an extremely hazardous undertaking.

Unfortunately for their owners, the officers of the *Gordon, Modern Greece* and *Sunbeam* timed their approaches poorly. All three vessels were discovered and cut off before reaching the Cape Fear River. When boarded at daylight on 28 September 1862, *Sunbeam* was only 1.5 miles from Fort Fisher. That British steamer was discovered running along the eastern shoreline of Smith Island. In spite of fire from the USS *State of Georgia,* the *Sunbeam* "paid no attention to it, ran on for Fort Fisher" which opened fire on the Union blockader. After a shell from the *State of Georgia* was fired over the *Sunbeam,* the vessel "rounded to, head offshore." Much to the surprise of the officers and crew of the *State of Georgia* the *Sunbeam* began "backing in toward the fort"

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58 J. F. Armstrong to U. S. District Court, Eastern District of New York, 28 September 1862, *ORN,* 8, p. 96.

and another was fired astern before the vessel surrendered.[59] In addition to confirming that it was not realistic to expect to run through the blockade unchallenged, loss of the *Modern Greece* and *Sunbeam* helped illustrate the fact that small coastal steamers and large trans-oceanic ships, although seaworthy and capacious, were not well suited to running a blockade maintained by steamers.

Coastal steamers like the *Gordon*, although of shallow draft, lacked seaworthyness, cargo capacity and speed. Large trans-oceanic ships like the *Modern Greece* and *Sunbeam* also lacked speed, were of deep draft and were highly visible because of their size and rig. Capture of the Z. C. Pearson and Company steamers, *Circassian, Patras, Stettin, Lodona, Phoebe, Merrimac* and *Peterhoff* and the destruction of the *Modern Greece* clearly illustrated the point. While that type of vessel was appropriate for carrying trans-Atlantic freight, it did not prove to be an effective blockade runner. Most were either captured or assigned to run between the islands and Great Britain.

When the tightening blockade and end of the cotton embargo reinforced the wisdom in shifting to steamers in 1862, the officers and pilots of those vessels adopted many of the tactics developed by the sailing ships that engaged in blockade running. The practice of clearing for another neutral port was equally important in maintaining the superficial trappings of legitimate trade. Cargoes of military supplies and weapons prohibited by British neutrality, were disguised for the blind eye of the customs inspectors by labels and declarations such as "merchandise", "machinery" or "hollow ironware." The ownership of vessels sailing on Confederate account and/or under Confederate command was concealed by registering them through British agents.

Following the successful amphibious invasion of the North Carolina sounds and the April 1862 capture and establishment of a base of naval operations at Beaufort, North Carolina, Flag-Officer L. M. Goldsborough began to significantly increase the number of vessels on station off Wilmington. By May, six steamers had been assigned to the Cape Fear and in July that number was increased to ten. Although service, repairs and logistical demands continued to reduce the number of those vessels on station at any given time, the impact of their presence was dramatic and forced a shift in the strategy and tactics employed by vessels running the blockade. Their presence and the

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59 *Ibid.*

threat of an amphibious invasion in the Cape Fear Region focused attention on developing the defenses of the Cape Fear. Those defenses would play the most critical role in both the success of blockade running at Wilmington and the tactics employed by vessels in the trade.

The increase in vessel strength enforcing the Cape Fear blockade during the summer of 1862 and the loss of the steamers *Gordon* and *Modern Greece* brought a shift in the strategy employed by both sail and steam powered vessels trading at Wilmington. Although fast schooners could avoid the slower Union steamers under the right conditions, the presence of several enemy vessels greatly increased the odds against successfully running through the blockade at either entrance to the Cape Fear. In response sailing vessels shifted the focus of their activities to yet unguarded inlets along the North Carolina coast.[60]

North of New Inlet blockade runners found the shallow shifting channels of Masonboro Inlet, Topsail Inlet, New River Inlet and Bogue Inlet to be convenient alternatives. To the west of Old Inlet, Lockwoods Folly Inlet, Shallotte Inlet and Little River Inlet were employed with a high degree of success especially by schooners. The cargoes of brigs and barks of deeper draft and reduced maneuverability were often lightered ashore in small boats and sloops. Soldiers and coast guards stationed in the vicinity provided what protection they could for the vessels and frequently assisted with handling cargoes. Freight was shipped by cart and wagon to Wilmington for distribution. The strategy proved remarkably successful until Union vessels were assigned to sporadically reconnoiter the inlets. Although that caused the captains of a number of those blockade runners to run their vessels aground and abandon them, it by no means stopped the traffic. In fact a reinterpretation of British neutrality in the winter of 1862, actually opened the door to smaller vessels of the type already engaged in using the shallow inlets.

A major step in solving the neutrality problems associated with running large trans-Atlantic vessels through the blockade occurred in December 1862. Confederate agent Louis Heyliger and Nassau merchant Henry Adderly negotiated the privilege of breaking bulk and trans-shipment with British colonial authorities. That concession formally opened the door for vessels to operate through the blockade out of British colonial possessions at Nassau,

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60 J. M. B. Clitzto to S. P. Lee, 3 November 1862, *ORN*, I, 8, p. 190.

Bermuda and Halifax. Problems encountered with large and slow steamers like the *Fingal, Nashville, Gladiator* and the loss of the *Bermuda* had made the necessity for employing fast, low profile steamers readily apparent to Fraser, Trenholm and Company. In January 1862, John Fraser and Company put the coastal steamer *Kate* into service between Nassau and Charleston. *Kate* had been built as the *Caroline* for the Florida Steam Packet Company by Samuel Sneden at Greenpoint, New York in 1852.[61] The 477-ton *Kate* was powered by a beam engine and was not particularly fast but reasonably seaworthy. Under the command of Captain Thomas Lockwood, *Kate* proved to be one of their most successful vessels.

In February 1862, Cunard, Wilson and Company negotiated the purchase of the Dublin and Glasgow ferryboat *Herald* for Fraser, Trenholm and Company. The 283-ton sidewheel steamer *Herald* was powerful, fast, seaworthy and had good cargo carrying capacity with a draft of only 12 feet fully loaded.[62] *Herald* was the first of many British public service steamers to be purchased to run the blockade. In July, *Herald* joined *Kate* in running back and forth from Charleston to Nassau and occasionally Bermuda to establish a pattern to be followed for the remainder of the blockade. At Nassau and Bermuda the steamers discharged shipments of cotton, agricultural products and naval stores and were loaded with freight and military cargoes from England and Europe.

To support steamers like *Kate* and *Herald*, Fraser, Trenholm and Company began to ship goods out from England to Nassau and Bermuda in their remaining sailing ships and the trans-oceanic steamers that proved to be unsuitable for blockade running. Those vessels received protection from British neutrality by clearing for British colonial ports at Bermuda, Nassau and occasionally Halifax, Nova Scotia. Although the Z. C. Pearson and Company steamer *Peterhoff* was captured enroute to its neutral destination at Matamoras most vessels made the voyage between "neutral" ports without interruption.

Trans-shipment of cargoes also permitted vessels to be insured at least as far as Halifax and the islands. Initially, insurance could be obtained for vessels running the blockade. According to the U. S. Consul in Liverpool the Z. C. Pearson and Company steamers *Modern Greece, Circassian, Settin, Ladona,*

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61 Nepveux, *Alfred Trenholm*, p. 39.

62 U. S. Consul, Liverpool, 12 February 1862, RG 84, NA.

Merrimac, Cleopatra, Khersinus and *Patras*, all of which had been chartered to carry "Rebel Government" freight, were "fully insured to run the blockade." The Consul also reported that Pearson and Company had settled with the underwriters "for the hull of the steamer *Settin* at 75%" of the value after that vessel was captured.[63] In an article on the loss of the Pearson and Company steamer *Modern Greece*, the *Liverpool Daily Post* confirmed that both the vessel and cargo were "fully insured by her owner." The *Lodona* captured on 4 August 1862 was also reported to have been "heavily insured at Lloyd's."[64]

As the blockade became more of a liability, underwriters were less inclined to insure vessels and rates climbed. When the *Minho* was chartered for £15,000 to run the blockade in July 1862, Lloyds was paid a premium of 60% on the ship and cargo.[65] The *Tubal Cain*, captured off Charleston on 24 July 1862, was also insured at Lloyd's.[66] Two unidentified steamers reported to be preparing to run the Charleston blockade were also reported to be insured by Lloyd's at a rate of "60 guineas per cent."[67]

As the blockade tightened and firms like Z. C. Pearson and Company filed huge claims, underwriters began to realize the increasing liability associated with attempting to trade through the Union fleet. By December 1862, Thomas Dudley reported: "I learn that the Insurance offices refuse to take risks on steamers to run the blockade...."[68] Five days later Dudley wrote Secretary Seward to defend his conduct against accusations that he had not been zealous in protesting the construction of Confederate privateers. In that letter Dudley pointed out that "all the merchants here with very few exceptions are underwriters therefore concerned in the Insurance business...." In the letter Dudley identified Fraser, Trenholm and Company, Leech Harrison and Forwood and Fernie Brothers, all heavily involved with the Confederate government and in trading through the blockade, as underwriters insuring vessels engaged in blockade running.[69]

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63 Liverpool Consular Dispatch, 25 July 1862, RG 84, NA.
64 *Liverpool Daily Post*, "Sinking of the *Modern Greece*", 29 July 1862 and *Liverpool Journal of Commerce*, "Capture of *Ladona*," 2 August 1862.
65 *Liverpool Journal of Commerce*, "The Steamer *Minho*," 6 August 1862.
66 *Liverpool Journal of Commerce*, "Capture of the *Tubal Cain*", 6 August 1862.
67 *Liverpool Journal of Commerce*, "The Steamers at Charleston", 2 August 1862.
68 Liverpool Consular Dispatch, 6 December 1862, RG 84, NA.
69 Liverpool Consular Dispatch, 11 December 1862, RG 84, NA.

In spite of the fact that increased risks convinced underwriters to stop writing policies for vessels running the blockade, Lloyds and several other London companies continued to provide limited insurance for blockade runners. For example, policies written in 1863 by the Commercial Union Assurance Company for vessels and cargoes extended only as far as the neutral ports of Matamoras, Bermuda and Nassau. Voyages beyond those neutral ports and into the Confederacy was considered an unacceptable risk. Between January and December 1863, Commercial Union Assurance Company wrote policies for the *Peterhoff* and *Miriam* in January, the *Denbigh* in October, the *Nutfield* in November and the *Vesta* and *Caledonia* in December.[70] Policies continued to be written for voyages to neutral ports, but rates increased and particular attention was given to the specific nature of cargoes following the capture and condemnation of the *Peterhoff.* Having cleared for Matamoras with contraband aboard, that steamer was considered a legal prize.

Although the *Kate* ran into Wilmington in August and again in November 1862, the pattern of trans-shipment in fast steamers was not implemented at Wilmington until December of that year. At the suggestion of Confederate agent Caleb Huse, several blockade runners owned by the Ordnance Department were to be operated between Wilmington and St. Georges, Bermuda. The *Cornubia*, ran into Wilmington on the morning of 18 December 1862. Like the *Gordon*, *Modern Greece* and *Sunbeam*, the *Cornubia* gauged her arrival off the Cape Fear to permit a run through New Inlet near daylight. To minimize the chances of being sighted, Captain Holmes ran the blockade runner south along the beach outside the breakers. Because of environmental conditions, the vessel "was scarcely visible from the deck and presented the appearance of whitish streaks on the undulations of the shore."[71] Once blockade runners ran inshore "getting....under cover of the woods" it was extremely difficult to maintain visual contact.[72] Because of the difficulty in seeing the ship and the vessel's speed, the *Cornubia* was able to succeed where the *Gordon*, *Modern Greece* and *Sunbeam* had failed.[73]

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70 Commercial Union Assurance Company, Voyage Book-1863, Guildhall Library.
71 W. H. Macomb to B. F. Sands, 19 December 1862, *ORN*, I, 8, pp. 314-315.
72 A.L. Case to S. P. Lee, 9 June 1863, *ORN*, I, 9, p. 64.
73 C. S. Boggs to S. P. Lee, 25 March 1863, *ORN*, I, 8, p. 626.

Running in "under the land" became one of the most important tactics employed by blockade runners entering and clearing Wilmington. Late on the morning of 28 December 1862, the second Ordnance Department steamer *Giraffe* was sighted southwest of Old Inlet near Little River. When the steamer headed inshore, the dark hull of the vessel disappeared against the coastline. Two hours later the crew of the *Giraffe* fired up their boilers and under a cloud of black smoke the rakish vessel "rapidly" disappeared.[74]

Running along the beach proved to be advantageous for several reasons. First, the coast line offered a valuable aid to navigation. Once a position had been established using landmarks and inlets on the barrier islands, a blockade runner was on a familiar path to the entrances of the Cape Fear. Although hazardous, the breaking surf and beach provided a reference to parallel. Even on the darkest moonless night the surf and beach were readily apparent. On 14 February 1863, B. F. Sands reported that one of his picket boats anchored in only 12 feet of water off Oak Island was almost run down by a blockade runner. The unidentified vessel passed between the picket boat and the beach "evidently having tracked the beach along, where, under the cover of the dark land, she could not be seen a quarter of a mile off in the obscurity of the hour before daylight."[75]

On 25 February, Acting Master Richard Hustace reported that "at 3:30 a.m. a steamer suddenly hove in sight between me and the land, coming out from under the cover of the woods; she passed between the boat and the shore, going at full speed."[76] Occasionally, running "under the land" provided sufficient cover to make successful runs even in daylight. A. L. Case reported that a "long, very low paddle-wheel steamer, with two pipes and two masts without yards" ran along the coast and into New Inlet near sunset on 2 March 1863. According to Case "she came from the northward and eastward, close along the land, under its shadow, and from her lowness was not visible until she threw up a dense volume of smoke within a mile and a half of Fort Fisher."[77]

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74 E. Hooker to B. F. Sands, 29 December 1862, *ORN*, I, 8, p. 336.
75 B. F. Sands to S. P. Lee, 14 February 1863, *ORN*, 8, pp. 527-528.
76 R. Hustace to D.L. Braine, 25 February 1863, *ORN*, I, 8, p. 573.
77 A. L. Case to S. P. Lee, 2 March 1863, *ORN*, I, 8, p 582.

In March 1863, a contraband "in the habit of going in pilot boats" provided a revealing description of a successful run into Wilmington by the steamer *Cornubia*. According to his account:

> ...the *Cornubia* arrived off Big Hill, some 12 miles N E. of New Inlet, at 9 a.m. of the 2d instant, and was ordered in the afternoon by Major Lamb, commandant of Fort Fisher, to be prepared to run in as soon as he could return to the fort and get his guns ready. She was run very close along the breakers by Jim Burroughs (a pilot living on the beach), who reported she ran five miles in twenty minutes.[78]

Brigadier-General W. H. C. Whiting confirmed the contraband's report in a communication to Major-General D. H. Hill on 6 March 1863, and requested that the Whitworth guns recovered from the *Modern Greece* remain at Fort Fisher and Fort Caswell.[79]

Running along the beach provided a backdrop against which vessels were extremely difficult to observe. To increase the chances of success in making that run, most vessels engaged in the trade were attempting to blend in with the shoreline environment and reduce their visible profiles by the fall of 1862. Although the majority of the vessels departing Great Britain to run the blockade were traditionally painted black, most running the blockade by the fall of 1862, had been painted a "light lead" color to blend in with sand and surf.

On 7 June 1862, Thomas H. Dudley, U. S. Consul at Liverpool, reported that the *Julie Usher* was being prepared to run the blockade. Dudley's informants confirmed that the ship's "whole outward appearance will be altered so far as they can do it as soon as she leaves Queenstown."[80] Dudley also presumed "these vessels will use paint freely after they leave port...."[81] When the steamer *Anglia* departed Liverpool in June she put into Bristol and "repainted part of her sides, took onboard a quantity of Black paint to repaint the ship...." and requested the "most effective dryers" to cure it. The captain boasted that "a daguerrotype had been taken of the ship at Liverpool but she would have a very different appearance when she got over."[82] Near midnight

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78 A. L. Case to S. P. Lee 26 March 1863, *ORN*, I, 8, pp. 630-631.
79 W. C. H. Whiting to D. H. Hill, 6 March 1863, *ORN*, I, 8, pp. 860-861.
80 U. S. Consular Dispatch, London, 14 January 1863, RG 84, NA.
81 *Ibid.*
82 U. S. Consular Dispatch, Liverpool, 21 June 1863, RG 84, NA.

on 29 December 1862, Acting-Volunteer E. Hooker of the USS *Victoria* reported a "very rakish" two-masted steamer off Shallotte Inlet that was disguised with "dark-colored paint."[83]

By the summer of 1862, vessels were being painted for a different reason. Instead of changing the outward appearance of the ship, paint schemes were used to make the vessel more difficult to see at night. One of the first was the Z. C. Pearson and Company steamer *Phoebe*. After arriving in Bermuda, the black-hulled *Phoebe* was painted "a light lead color" to camouflage her appearance.[84] Light colored vessels were more difficult to see against the surf and sand than dark ones. In July 1863 the U. S. Consul at San Juan, Puerto Rico reported on the presence of the steamer *Juno* and pointed out that, "this class of vessel is generally painted white, lead, or some neutral color, as being less discernible at night than those of a darker [color]."[85]

Perhaps to preserve some semblance of legitimate trade, virtually every vessel departing Britain to run the blockade was painted the traditional black. However, most carried a supply of "light lead" paint to apply at sea or in the harbor at St. Georges, Bermuda. Two days after the screw steamer *Onachetoo* arrived at St. Georges in September 1862, the crew "commenced painting her a lead color."[86] In December 1862, the Confederate steamer *Cornubia* was reported to have "had her color changed since her arrival here from black to light lead color."[87] When the steamer *Merrimac* was being prepared to run the blockade in March 1863, the "hull and upper works [were] painted lead color."[88] In November 1863, Captain Daniel B. Ridgely complained that "the blockade runners are now all painted white, and run so close to the beach that it is impossible to see them 100 yards off at night."[89]

Although "lead color" was the most frequently selected color for vessels engaged in blockade running, it was by no means universally adopted. White was also popular. The Collie and Company steamer *Venus* was painted white following her arrival at St. Georges in June 1863 and the *Dare* was painted

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83 E. Hooker to B. F. Sands, 29 December 1862, *ORN*, 8, p. 336.

84 U. S. Consular Dispatch, Bermuda, 28 August 1863, RG 84, NA.

85 U. S. Consular Dispatch, Puerto Rico, 27 June 1863, *ORN*, I, 9, p. 128.

86 U. S. Consular Dispatch, Bermuda, 17 September 1862, RG 84, NA.

87 U. S. Consular Dispatch, Bermuda, 8 December 1862, RG 84, NA.

88 U. S. Consular Dispatch, Bermuda, 23 March 1863, RG 84, NA.

89 D. B. Ridgely to S. P. Lee, 10 November 1863, *ORN*, I, 9, pp. 294-295.

white in December.[90] The steamer *Constance* was also painted white in April 1864.[91] In January 1864, the *Nutfield* was painted a "light color" in St. Georges.[92] The *Lord Clyde* was quickly painted a "light color" upon her arrival in Bermuda the following week.[93] The *Ceres* received "a coat of light paint" in November.[94] The U. S. Consul in Bermuda reported that the *Vixen, Vulture, Emma Henry* and *Evelyn* all had been painted white since their arrival in November 1864.[95] Another unidentified steamer was sighted by the crew of the USS *Keystone State* on 7 November 1863, off Wilmington. That vessel had a "long, low hull, painted gray" with "two smoke pipes, painted white."[96]

Not all of the blockade runners were painted white, gray or a light color. The steamer *Harriet Pinckney* received a coat of "light blue paint" at St. Georges in preparation for running the blockade in May 1863.[97] The *Gladiator* arrived in Bermuda "having been partly painted a light brick color."[98] J. B. Breck of the USS *Niphon* reported chasing a "greenish white" sidewheel steamer off Masonboro Island.[99] When the *Constance* and *Falcon* arrived at Halifax, Nova Scotia in August 1864, their smokestacks had been "painted red instead of white" as previously reported.[100] The *Owl*, one of the last blockade runners purchased and operated by the Confederacy, was painted pink while under the command of John N. Maffitt. An unidentified screw steamer discovered off Wilmington on 11 January 1864, was distinctly painted a combination of both white and dark lead. "Her smoke pipe and from that forward was painted white, while the after part was painted a dark lead color."[101]

By late in the war a vessel's color and appearance on departing Great Britain was apparently less important. By the time the *Colonel Lamb* was launched in September 1864, maintaining the guise of legitimate commerce

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90 U. S. Consular Dispatch, Bermuda, 12 June 1863, RG 84, NA and U. S. Consular Dispatch, Bermuda, 21 December 1863, RG 84, NA.

91 U. S. Consular Dispatch, Bermuda, 20 April 1864, RG 84, NA.

92 U. S. Consular Dispatch, Bermuda, 18 January 1864, RG 84, NA.

93 U. S. Consular Dispatch, Bermuda, 17 June 1863, RG 84, NA.

94 U. S. Consular Dispatch, Bermuda, 10 November 1863, RG 84, NA.

95 U. S. Consular Dispatch, Bermuda, 16 November 1864, *ORN*, I, 10, p. 601.

96 E. Donaldson to D. B. Ridgley, 13 November 1863, *ORN*, I, 9, p. 272.

97 U. S. Consular Dispatch, Bermuda, 9 May 1863, RG 84, NA.

98 U. S. Consular Dispatch, Bermuda, 27 August 1862, RG 84, NA.

99 J. B. Breck to W. A. Parker, 10 May 1864, *ORN*, I, 10, pp. 43-44.

100 G. Welles to S. P. Lee, 23 August 1864, *ORN*, I, 10, p. 386.

101 E. Donaldson to S.P. Lee, 11 January 1864, *ORN*, I, 9, p. 403.

suggested by the traditional black hull must have been less of a consideration for blockade runners. As the name and design no doubt confirmed, the *Colonel Lamb* was clearly built for blockade running. When American Consul Thomas Dudley reported the launch of the steamer he confirmed that it had already been painted "slate color" with black smoke pipes and paddle box insets.[102] Vessels like the *Gem* had already been painted white by the time she arrived at Cork in November 1864.[103] When the *Stag* arrived in Bermuda that same month, the vessel had already been painted white.[104]

A coat of paint was not the full extent to which the owners and officers of some blockade runners went to effect their disguise. While the *Minho* was in Bermuda in September 1862, the mainmast was taken out and the fore and mizzen topmasts and yards were removed. When the screw steamer *Aries* was captured on 28 March 1863, the vessel was found to have been equipped with hinged masts and a retractable funnel. The masts and crutches into which they were stowed when lowered represented a design similar to those on vessels operating on rivers where fixed bridge crossings represented an obstruction to navigation. The retractable pipe was an equally early design developed and used by some of the first steamers built to operate as tugs on the canals developed in Europe and Great Britain early in the nineteenth century. The Confederate steamer *Merrimac* was also equipped with two "smokestacks, hinged for lowering and only a short mast forward to serve as a station for lookouts and staysails."[105] The *City of Petersburg* had "two strike masts and telescopic funnels."[106] One of the disadvantages of retractable smoke pipes was that they had a tendency to flare when lowered to reduce the vessel's profile. A "strange light" reported by the lookout of the USS *Eolus* shortly after midnight on 20 October 1864, proved to be the "flame out of the smoke-stacks of a steamer at full speed."[107]

When the *Emily* was found ashore and ablaze in February 1864, a boarding party form the USS *Florida* noted that the vessel had two masts that had "apparently been dismantled to run the blockade."[108] In fact, taking down

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102 T. H. Dudley to W. H. Seward, 7 September 1864, *ORN*, I, 10, pp. 438-439.
103 U. S. Consular Dispatch, Bermuda, 28 November 1864, RG 84, NA.
104 U. S. Consular Dispatch, Bermuda, 23 March 1863, RG 84, NA.
105 A. L. Case to S. P. Lee, 27 July 1863, *ORN*, I, 9, p. 133.
106 P. Crosby to S. P. Lee, 11 February 1864, *ORN*, I, 9, pp. 474-476.
107 W. O. Lundt to D. L. Braine, 20 October 1864, *ORN*, I, 10, p. 575.
108 P. Crosby to S. P. Lee, 11 February 1864, *ORN*, I, 9, pp. 474-476.

all but the lower masts was apparently a common practice at Bermuda. Before the *Merrimac* left Bermuda in March 1863, the mainmast was removed at the same time the upper works were painted.[109] In June 1863, the steamer *Venus* arrived at St. Georges, Bermuda. In addition to putting on a coat of white paint, the crew took down all of the vessel's topmasts and yards.[110] Two paintings, possibly commissioned by U. S. Consul Charles M. Allen, illustrate the rigging of the *Venus* both before and after alterations were made for running the blockade.[111] Allen retained Bermuda artist Edward James to produce water color likenesses of at least some of the blockade runners that entered at St. Georges.[112] The yards of the steamer *Hawk* were also taken down at St. Georges in July 1864.[113]

The effect of a coat of light paint and reduced profile was documented by a 20 February 1863 report from H. H. Savage to B. F. Sands. Acting Master Savage described a blockade runner that escaped his vessel off Little River as a "....very low and long boat, with propeller wheels; no masts; painted lead color, and a telescope funnel, which was lowered down most even with the top of her paddle boxes." Savage admitted; "She was a hard boat to see in a fog."[114]

Taking down the masts and yards significantly reduced the profile of the blockade runners and made them all the more difficult to identify. That difficulty was further compounded by scheduling runs through the blockade primarily at night. The September 1862 escape of the steamer *Kate* caused S. P. Lee to chastise the officers of the Wilmington Squadron for maintaining consistent stations that could be observed during the day and recorded to facilitate running out at night.[115] The use of highly maneuverable steamers made running the blockade at night an infinitely less risky proposition. By the fall of 1862, virtually all attempts to run out and most of the inward attempts to run the blockade were made under the cover of darkness. In December 1862, Captain B. F. Sands wrote to S. P. Lee of the rigors of maintaining an effective nocturnal surveillance complaining that "....I never pretend to turn in at night,

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109 U. S. Consular Dispatch, Bermuda, 23 March 1863, RG 84, NA.

110 U. S. Consular Dispatch, Bermuda, 12 and 17 June 1863, RG 84, NA.

111 Paintings of the steamer *Venus* at Bermuda in the collections of the National Maritime Museum, Greenwich.

112 U. S. Consular Dispatch, Bermuda, 23 March 1864, RG 84, NA.

113 U. S. Consular Dispatch, Bermuda, 13 July 1864, RG 84, NA.

114 H. H. Savage to B. F. Sands, 23 February 1863, *ORN*, I, 8, p. 562.

115 S.P. Lee to Commander Scott, 21 September 1862, *ORN*, I, 8, p. 80.

and am frequently on deck during the night inspecting the lookouts in person, taking what sleep I can get in my clothes, ready for a moments call." Captain Sands admitted that he could not see how the blockade could be made effective "unless we string the whole coast with steamers; for, on dark nights, I am sure, from my own personal observation, that vessels cannot be seen half a mile distant, and under favorable circumstances, in the absence of the moonlight, we can not see a vessel a mile off."[116] Less than two months later Sands complained that another blockade runner had succeeded in getting into the Cape Fear River. No one except the crew of a picket boat anchored on the bar that was almost run down by the blockade runner saw the vessel pass.[117]

By running during the "dark of the moon" blockade runners could take advantage of the nights of lowest visibility. By December 1863, the practice was so universally adopted that S. P. Lee wrote Gideon Welles that the blockade breakers do not run on a moonlight night.[118] By 1864, the stage of the moon was so important that the entire trade revolved around scheduling a round trip into and out of the Confederacy during the dark period of the lunar cycle.

During the summer and early fall phosphorescence could also be a problem for blockade runners and blockade vessels alike. In chasing a blockade runner on the night of 7 September 1864, Captain B. F. Sands found that the USS *Fort Jackson* was "showing so much luminous water under her paddle wheels that I stopped to await events and not expose my whereabouts to the runner...."[119] That same month the USS *Alabama* reported "a steamer passing to the southward with a perfect halo of white foam around her."[120]

To facilitate running the blockade during the "dark of the moon" Confederates developed a system of lights and signals to communicate between Anglo-Confederate steamers and serve as navigation references. Although difficult to identify, primary elements of a system of communication were apparently in place by the spring of 1862. When the steamer *Bermuda* was captured in May of that year, a captured light signal code book confirmed that such a system was in place at Charleston. The signal book onboard the *Bermuda* included the following complex combination of messages.

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116 B. F. Sands to S. P. Lee, 23 December 1862, *ORN*, I, 8, pp. 313-314.
117 B. F. Sands to S. P. Lee, 14 February 1863, *ORN*, I, 8, pp. 527-528.
118 S. P. Lee to G. Welles, 10 December 1863, *ORN*, I, 9, p. 345.
119 B. F. Sands to S. P. Lee, 7 September 1864, *ORN*, I, 10, p. 435.
120 F. Smith to B. F. Sands, 7 September 1864, *ORN*, I, 10, p. 437.

Place the steamboat in a position which will bring me in W.N.W. and burn a single blue light.

A blue light with a white light above it will signify: The chances are bad for getting in Maffitt's Channel; try Ship Channel tomorrow night at high water.

A blue light with a white light to the south of it will signify: The chances are bad for your getting in here at present.

A blue light with a white light to the north of it will signify: Try Pumpkin Hill Channel to-morrow night at high water.

A single red light will signify: Steer in for us.

A red light with a white light above it will signify: Go to Bermuda and await orders from your owners.

A red light with a white light below it will signify: Steer in W.S.W.

A red light with a white light to the north of it will signify: Steer in W. by S.

A red light with a white light to the south of it will signify: Steer in west.

Two red lights, one above the other, will signify: Steer in W. by N.

Two red lights alongside each other will signify: [imperfect]

Two rockets from the boat will signify: We are ashore, all safe.

One rocket from the boat will signify: We are captured.[121]

To assist vessels running the blockade at Wilmington the Confederate Signal Corps developed a series of signal stations to guide vessels in under the batteries protecting each inlet.[122] By the fall of 1862, blockade runners making the shoreline north of New Inlet followed the breakers south and near Craig's Pole or Big Hill, approximately two miles south of Masonboro, signaled the shore using a hooded lantern. That signal could not be seen by vessels on the blockade but identified the vessel as a blockade runner and communicated a request for navigation lights.

Confederate pickets on the beach, possibly as far north as Swansboro, manned fifteen foot high scaffolds and waved a lighted torch in the direction of Fort Fisher.[123] The torch was constructed using a ball of cotton soaked in turpentine. That signal was repeated and quickly extinguished by stations

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121 S. F. Du Pont to G. Welles, 5 May 1862, *ORN*, I, 12, p. 797.
122 S. P. Lee to Commanding Officers, 16 December 1863, *ORN*, I, 9, pp. 355-356.
123 A. Murry to S. P. Lee, 4 February 1863, *ORN*, 8, p. 503.

along the beach as the blockade runner passed. "The batteries on the coast, one about 5 miles and another 10 above Fort Fisher, show bright lights in the night for the guidance of the blockade runners."[124] As communications reached Fort Fisher before the blockade runner, Colonel Lamb and the garrison could prepare to provide covering fire for the vessel at New Inlet.[125] At Fort Fisher the blockade runner called for range lights to navigate New Inlet by hanging a hooded red lantern over a hooded white lantern on the inshore side of the vessel near the waterline. Upon receiving that signal the bar would be lighted and range lights positioned to identify the channel.[126] In March 1863, A. L. Case reported that communications with steamers running the blockade were "telegraphed along the beach from station to station" and information concerning vessels headed for New Inlet could dispatched to Fort Fisher well in advance of their arrival.[127]

A brilliant light, perhaps calcium, was mounted on top of the mound constructed at Fort Fisher in 1864, and was used to identify and illuminate the inlet for vessels running the blockade.[128] The escaped mulatto servant of Colonel Lamb reported that "the coast was now so strongly guarded by the Yankee gunboats, the runners must take their chance to run directly through the fleet in and out, and the light was to aid them in doing so."[129] By March 1864, Confederates had also established a reference light at Masonboro to inform blockade runners of their position on the coast.[130]

To ensure reliable communication, Confederate Signal Corps officers were frequently assigned to blockade runners.[131] A captured letter from the purser of the *Juno* confirmed that a signal officer aboard that vessel communicated a request for setting range lights for New Inlet with the garrison at Fort Fisher in September 1863.[132] By late fall of 1864, signal officers or signal

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124 W. A. Parker to S. P. Lee, *ORN*, I, 9, pp. 369-370.

125 Report of J. J. Orrell, S. P. Lee, 12 November 1863, *ORN*, I, 9, pp. 300-301 and W. A. Parker to S. P. Lee, 20 December 1863, *ORN*, I, 9, pp. 369-370.

126 Report from *Douro* Prisoners, 12 October 1863, *ORN*, I, 9, p. 234.

127 A. L. Case to S. P. Lee, 2 March 1863, *ORN* I, 8, p. 582.

128 B. F. Sands to S. P. Lee, 5 May 1864, *ORN*, I, 9, pp. 729-730 and J. B. Breck to S. P. Lee, 26 May 1864, *ORN*, I, 10, pp. 93-94.

129 *Ibid.*

130 S. P. Quackenbush to S. P. Lee, 4 March 1864, *ORN*, I, 9, pp. 524-525.

131 Colonel Lamb Diary, 29 November 1864 and 1 December 1864, College of William and Mary and O. S. Glisson to G. Welles, 14 September 1864, *ORN*, I, 10, pp. 453-454.

132 J. J. Almy to S.P. Lee, 30 September 1863, ORN, I, 9, p. 214.

operators were aboard most vessels. In his diary Colonel Lamb noted that the steamer *Vulture* arrived on 29 November, the *Owl* arrived on 2 December and the *Talisman* arrived on 8 December with signal operators as part of their crew.[133] When the *A. D. Vance* was captured in September 1864, Cyrus Neel was aboard as the vessel's signal officer and was sent to New York as a prisoner of war.[134] In October 1864, the Confederate signal officer aboard the *Condor* was able to effectively direct the protective fire of Fort Fisher from his stranded vessel.[135] That was not always possible and the *Beatrice* arrived on 31 October 1864, with no signal officer was on board.[136] Almost a month later the steamer *Emma Henry* came through the blockade under the command of Captain E. C. Reid without either a signal officer or a pilot.[137]

A similar system of lights was established along the coast west of Old Inlet. On 14 February 1863, William Earle reported that while his picket boat was anchored in only 12 feet of water off Oak Island the crew discovered the light of a steamer running rapidly along the coast for the Western Bar Channel. As the side-wheel vessel passed between the picket boat and the beach, Acting Master Earle reported that the light was extinguished, ship's engines were stopped and a rocket was fired over the stern. After the vessel resumed her course Earle reported that the signal light reappeared and was answered by a light from Fort Caswell."[138] On 19 February, Sands confirmed that the vessel was the Confederate steamer *Giraffe*.[139]

In 1864, the system of communication along the western approach to the Western Bar was enhanced by the construction of a telegraph system that connected Lockwoods Folly Hill with Smithville.[140] That no doubt was used to facilitate both navigation and salvage of vessels run ashore. On 6 March the

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133 Colonel Lamb Diary, 29 November 1864 and 1 December 1864, College of William and Mary.
134 O. S. Glisson to G. Welles, 14 September 1864, ORN, I, 10, pp. 453-454.
135 S. P. Lee to Gideon Welles, 7 October 1864, *ORN*, I, 10, pp. 531-532.
136 Colonel Lamb Diary, 31 October 1864, College of William and Mary.
137 *Ibid.*
138 W. Earle to B. F. Sands, 14 February 1863, *ORN*, I, 8, p. 528.
139 B. F. Sands to S. P. Lee, 19 February 1863, *ORN*, I, 8, p. 536.
140 D. L. Braine to S. P. Lee, 8 April 1864, *ORN*, I, 9, p. 590.

crew of the USS *Mount Vernon* discovered that a fixed light had been placed in the Bald Head Lighthouse to assist blockade runners in passing through the Western Bar Channel.[141]

When a blockade runner attempted to run out of Old Inlet on 6 September 1864, Acting Master E. S. Keyser reported that the Confederate garrison at Fort Holmes sent a "small balloon" aloft from Bald Head Lighthouse. The balloon was attached to a string and allowed to rise approximately 50 yards above the light before being pulled down. The previous night a balloon was sent up 200 yards above the light from a point north of the lighthouse. After approximately ten minutes it was raised another 100 yards and carried along the beach to the south before being pulled down. Acting Master E. S. Keyser speculated that the balloon might have been a distraction to "draw our attention that way in order to favor the escape of a blockade runner along the northern shore, which was at that time shaded by a dense, black cloud...."[142]

Some blockade runners carried flares, rockets and other pyrotechnic signals similar to those distributed to vessels on the blockade. When discovered, the pyrotechnics were used to make false signals. An unidentified steamer running out of New Inlet on 5 October fired two rockets and "showed a white light twice" before being lost in the darkness.[143] An unidentified blockade runner running along the south shore of Smith Island answered the challenge of the USS *Emma* with a "common blue light" on 26 July 1864.[144]

Using pyrotechnics brought in through the blockade, the garrisons at Fort Fisher and Fort Caswell also sent up signals in an effort to confound the communications of the blockade fleet. A steamer running to the southeast out New Inlet in September 1864 was fired on by the USS *Niphon*, and the garrison at Fort Fisher sent up a rocket to the northeast and fired three guns "with the intention of confusing the fleet."[145] The garrison also fired rockets similar to those employed by the Union fleet in an effort to confuse matters as much as possible when vessels made their final approach at New Inlet.[146] At least one

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141 Log of the *Mt. Vernon*, 6 March 1864, *ORN*, I, 9, p. 781.
142 E. S. Keyser to B. F. Sands, 7 September 1864, *ORN*, I, 10, pp. 436-437.
143 E. Kemble to S. P. Lee, 6 October 1864, *ORN*, I, 10, p. 527.
144 J. A. Williams to S. P. Lee, 11 August 1864, *ORN*, I, 10, pp. 378-379.
145 E. Kemble to O. S. Glisson, 30 September 1864, *ORN*, I, 10, p. 493.
146 Extracts from a letter captured on the *Juno*, N. D., *ORN*, I, 9, p. 214.

report suggests that the men under Colonel Lamb's command attempted to emulate the signals of the blockade squadron to draw attention away from vessels attempting to enter New Inlet. On 30 September 1864, Acting Master Edmund Kemble reported that "the fort threw up a rocket to the N. and E., firing three guns at the same time, doubtless with the intention of confusing the fleet."[147] Later on 6 October 1864, Acting Master Kimball also reported that a steamer "threw up two rockets and showed a white light twice, of which the fort and batteries seemed to take notice, as they opened fire...."[148]

On the night of 9 September the Confederate garrison at Fort Caswell used rockets to help cover the escape of one of the new class of fast blockade runners. The rockets were fired to the northwest to suggest a vessel running in along the south side of Smith Island. In getting underway to intercept a vessel on that course Acting Volunteer Lieutenant William Dennison of the USS *Eolus* discovered a paddle wheel steamer running out to the west along the coast line of Oak Island.[149] The USS *Montgomery* reported rockets apparently thrown up by a "picket station" on Oak Island on the night of 7 August 1864.[150]

The system of communication and navigation proved to be so important that on 11 March 1864, Lieutenant John Wilkinson was ordered to Wilmington to take charge of standardizing and supervising those operations. According to his orders Wilkinson was to:

> ....establish and preserve in operation such lights at Bald Head, the Mound, and at other places as, in your judgment, will best aid trading vessels to enter and depart from the Cape Fear River. In connection with this subject you will establish day and night signals and sailing directions for all such vessels; determine from time to time any changes in the depth of water of the entrances; examine the qualifications of pilots and give them certificates of such examinations. You will also exercise such a general supervision over vessels engaged in trade, and on board of which cotton is being shipped, as will enable you to determine whether, in character and condition, as well of the vessel as of the officers and crews, they justify the shipment by them of Government cotton. You will also establish such port regulations necessary to

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147 E. Kemble to O. S. Glisson, *ORN*, I, 10, p. 492.

148 E. Kemble to S. P. Lee, *ORN*, I, 10, p. 527.

149 E. S. Keyser to B. F. Sands, 9 September 1864, *ORN*, I, 10, pp. 447-448 and W. E. Dennison to B. F. Sands, 9 September 1864, *ORN*, I, 10, p. 448.

150 E. H. Faucon to B. F. Sands, 7 August 1864, *ORN*, I, 10, p. 377.

> facilitate and exclusively connected with the exportation of cotton and importation of Government supplies, and not inconsistent with the rights of the State of North Carolina, as you may deem necessary.[151]

Lieutenant Wilkinson was also instructed "to establish day and night signals and sailing directions for all such vessels...."[152] To set up and operate the navigation lights Wilkinson received authorization to transfer 20 men from the military force at, or near, Wilmington. Another fifty men were to be made available for Wilkinson to organize a small force to facilitate saving lives and salvaging cargoes from vessels run ashore in attempting to run the blockade.[153]

The light at Cape Lookout was also used by blockade runners to establish their position and time their runs into Wilmington.[154] That was also the case off Cape Fear. Although there was no light like those at Cape Lookout and Cape Hatteras, the United States had replaced the lightship captured and removed by the Confederates in 1862. The captain of the Cape Fear lightship reported frequently sighting blockade runners and complained that the Navy did not keep a ship in the vicinity to halt the practice.[155] In January 1864 John Almy, Commander of the USS *Connecticut* reported:

> In many instances, as is well known, they make the light-ship and hover about there watching for an opportunity to run in. This is the testimony of the captain of the light-ship. He has lately visited Washington, I understand, and has been commenting upon the blockading squadron down here in not being more about the vicinity of the light-ship and using greater exertion to capture blockade runners, which show themselves about there so often.[156]

S. P. Lee reported "inbound blockade runners hovering off Cape Lookout Shoals with a view to run in at night."[157] Vessels running in and laying to off Cape Lookout and Cape Fear could bank their fires during the day and thus not produce the telltale plumes of black smoke that distinctly identified their

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151 S. R. Mallory to J. Wilkinson, 11 March 1864, *ORN*, I, 9, pp. 804-805.
152 *Ibid.*
153 *Ibid.* and S. P. Lee to G. Welles, 15 September 1864, *ORN*, I, 10, pp. 454-455.
154 S. P. Lee to Cushing, 7 April 1864, *ORN*, I, 9, p. 588.
155 J. J. Almy to S. P. Lee, 25 January 1864, *ORN*, I, 9, p. 417.
156 *Ibid.*
157 Instructions from S. P. Lee, 29 January 1864, *ORN*, I, 9, pp. 418-419.

position. At dusk they would run westward along the coast until making contact with the line of signal stations established along the beaches. With communication and lights to help navigate, steamers could run along the beach literally at full speed just outside the line of the surf until under the guns of Confederate fortifications near New Inlet.

On a quiet night the sounds of paddle wheels could be distinctly heard and were often reported by Union officers.[158] Running along the beach in the noise of the surf also masked the sounds of a blockade runner's passage. Acting Master Richard Hustace reported that "the breaking of the surf on the beach drowned the noise of her paddles" in describing the successful passage of a steamer that was "very long, low hull, side-wheels, short smokestack, no masts."

As noise carries exceptionally well over water, blockade runners adopted a number of techniques to ensure that it was minimized. In order to avoid the sound created by blowing off excess steam the *Kate* was equipped with "a steam pipe on the boiler leading to the donkey suction pipe to blow steam through the bottom, because if stopped among them and blow off the least [we] are made, so I carry a good head of steam, and [if] suddenly stopped can keep it in check without damping my fires for going ahead again."[159] When the steamer *Lilian* was captured her crew reported an "efficacious English remedy practiced on board the *Lilian*, to have good steam, yet keep position and prevent noise" associated with blowing off excess steam. That exercise consisted of turning in short circles to use excess steam generated by keeping the fires hot while maintaining a station.[160] The critical nature of such a consideration can be seen in the destruction of the *Herald/Antonica*. It was "by the escape of steam" that the attention of watches aboard the USS *Aries* was focused in the direction of the *Herald*. That sound carried over four miles and gave the position of the blockade runner away.[161]

One distinct advantage of screw propulsion was the lack of noise produced by the vessel's machinery. When the Dudgeon steamer *Kate* entered Charleston early in the summer of 1863, she was almost captured or sunk when

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158 S. P. Lee to G. Welles, 6 February 1864, *ORN*, I, 9, pp. 421-422 and J. M. Williams to B. F. Sands, 2 October 1864, *ORN*, I, 10, p. 538.

159 Unsigned letter to M. Dudgeon, 30 June 1863, *ORN*, I, 9, p. 123.

160 S. P. Lee to G. Welles, 1 September 1864, *ORN*, I, 10, pp. 413-414 and S. P. Lee to F.D. Stuart, 22 September 1864, *ORN*, I, 10, pp. 474-475.

161 E. F. Devens to S. P. Lee, 23 December 1863, *ORN*, I, 9, p. 363.

"a large paddle steamer coming in at the same time, close to us, alarmed them with her wheels flapping." In an unsigned letter to M. Dudgeon captured aboard the *Kate* in July, the author related that "we are not the fastest here, but we have a great advantage by running so quiet."[162]

Once a vessel was discovered success often depended on speed. The increase in steamers on the blockade in 1862 made that a priority for blockade runners. On 14 November 1862, the U. S. Consul at Liverpool reported that:

> They have recently been buying all the fast vessels-steamers-they can find for sale, and are now in treaty for three of the very fastest and best boats that have been built in England. They are new, all alike, 480 tons each, and built to run between Dover and Calais. They are side-wheel, built in the best possible manner, covered with steel plates instead of iron, and are very fast and of light draft of water, and are wanted to run in with cargoes from Bermuda and Nassau.[163]

By early 1863, vessel commanders on the Wilmington Station began to report the appearance of much faster vessels entering the trade. One of the first of those reports was from the captain of the USS *Victoria.* In a 12 January 1863 letter from S. P. Lee to Gideon Welles, Lee alluded specifically to the *Giraffe*'s "greatly superior speed" and confirmed that the vessel had "easily managed to elude the blockader."[164] The following month J. D. Warren Acting Master of the USS *Daylight,* not the fastest vessel on the blockade, reported being outrun by an unidentified steamer attempting to enter Old Inlet.[165] In March, A. L. Case of the USS *Iroquois* complained that "none but quick vessels in good order can be of any service off New Inlet" because "the class of vessels now violating the blockade is far different from those attempting it a year ago."[166]

The speed of vessels engaged in running the blockade continued to steadily increase during 1864. Shortly after midnight on 27 July 1864, the officers and crew of the USS *Alabama* heard the paddlewheels of a blockade runner approaching close along Frying Pan Shoals. On being discovered, the sidewheel steamer quickly out distanced the *Alabama* and disappeared. After

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162 Unsigned letter to M. Dudgeon, 30 June 1863, *ORN,* I, 9, p. 123.
163 Consular Dispatch, Liverpool, 14 November 1862, *ORN,* I, 8, p. 266.
164 S. P. Lee to G. Welles, 12 January 1863, *ORN,* I, 8, pp. 418-419.
165 J. D. Warren to S.P. Lee, 16 February 1863, *ORN,* I, 8, pp. 531-532.
166 A. L. Case to S. P. Lee, 12 March 1863, *ORN,* I, 8, p. 599.

attempting to follow the vessel's wake the *Alabama* discovered the steamer again at daylight and resumed the chase. When a breeze sprang up from the south, the steamer turned into the wind to provide better draft and the *Alabama* was dropped quickly astern as "his speed increased amazingly."[167] In a report on the "uselessness" of the USS *Dacotah,* a frustrated Commander A. G. Clary also wrote:

> I wish to furnish you with some information relative to the speed of blockade runners as experienced during the temporary command of the USS *Keystone State* and while passenger in her to join this ship.
>
> There were nine chases in all, in about thirty days; of these, two captures and 92 bales of cotton picked up. Three or four were compelled to throw their cargo overboard. In one of these chases where the *Connecticut* joined (and beating her), the *Keystone State,* going at the speed of nearly 13 knots for the best part of a day, was compelled to give up the chase. The speed of these contraband steamers is beyond all precedent of late. I have never experienced anything like it.[168]

In a similarly frustrated communication to Gideon Welles, Rear-Admiral David D. Porter admitted that "the new class of blockade runners is very fast, and sometimes come in and play around our vessels; they are built entirely for speed."[169]

As faster vessels appeared on the blockade in response to requests from the officers on the Wilmington Station and chases became more dangerous, blockade runners adopted another tactic. When they were unable to outrun one of the fast steamers being assigned to the Wilmington Station in 1864, blockade runners would lighten their vessel by throwing cargo overboard. In reporting on an unsuccessful chase, the captain of the *Santiago de Cuba* reported that his vessel was the "fastest vessel on the blockade." However, he admitted that after the unidentified steamer he was pursuing started to throw cotton overboard "she began to leave us" and within seven hours was completely out of sight. He cautioned S. P. Lee that "there are but few blockade runners that go less than 14 miles per hour."[170]

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167 F. Smith to S. P. Lee, 27 July 1864, *ORN,* I, 10, p. 314.
168 A. G. Clary to S. P. Lee, 18 June 1864, *ORN,* I, 10, pp. 160-161.
169 D. D. Porter to G. Welles, 15 December 1864, *ORN,* I, 11, p. 195.
170 O. S. Glisson to S. P. Lee, 27 June 1864, *ORN,* I, 10, pp. 212-213.

Commander James Madison Frailey of the USS *Quaker City* reported a similar incident on 30 June 1864. That vessel was chasing a sidewheel steamer south of Cape Fear when the blockade runner began to throw cotton overboard. As soon as the vessel was lightened, the blockade runner began to pull rapidly away from the USS *Quaker City* and Commander Frailey gave up the chase.[171] Commander Clary of the USS *Dacotah* reported that "13-knot cruisers may gain on them during the early part of the chase, but after they lighten by throwing overboard part of their cargo their speed is unprecedented."[172]

When the British steamer *Rouen* was captured by the USS *Keystone State,* Commander Pierce Crosby reported that one of the fifteen knot blockade runners engines was "out of order."[173] A few days later on 11 July another steamer ran away from the *Keystone State* after the crew dumped a part of the deck cargo of cotton overboard. Much to Commander Crosby's chagrin "as soon as she found she could outrun us, she hoisted the rebel flag and kept it flying during the time we were in sight of her."[174] Like the *Rouen,* the British steamer *Boston* was captured when her machinery broke down while attempting to outrun the USS *Fort Jackson.*[175]

One of the *Falcon* class blockade runners was briefly chased by the USS *State of Georgia* at daylight on 8 August 1864. The blockade runner never changed course and by 7:30 a.m. was completely out of sight.[176] Apparently that same vessel was chased on the night of 6 August by the *Santiago de Cuba.* Although the *Santiago de Cuba* was able to keep a dim light on the steamer in sight during the night, at dawn the blockade runner began to throw overboard cotton and quickly disappeared.[177] In July 1864, the USS *Nereus* reported a steamer off Lockwoods Folly Inlet rapidly leaving them astern after throwing overboard a substantial portion of the cargo.[178]

After throwing overboard a portion of the cotton stowed on deck, another unidentified steamer out ran the *Banshee,* one of the fast captured blockade runners sent to reinforce the blockade, the *Monticello* and

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171 J. M. Frailey to S. P. Lee, 30 June 1864, *ORN,* I, 10, pp. 219-220.
172 S. P. Lee to G. Welles, 1 July 1864, *ORN,* I, 10, pp. 221-222.
173 P. Crosby to G. Welles, 2 July 1864, *ORN,* I, 10, pp. 223-224.
174 P. Crosby to G.Welles, 11 July 1864, *ORN,* I, 10, pp. 257-258.
175 B. F. Sands to G. Welles, 8 July 1864, *ORN,* I, 10, p. 242.
176 S. Nicholson to O. S. Glisson, 8 August 1864, *ORN,* I, 10, p. 328.
177 O. S. Glisson to S. P. Lee, 8 August 1864, *ORN,* I, 10, pp. 359-360.
178 J. C. Howell to B. F. Sands, 12 August 1864, *ORN,* I, 10, pp. 381-382.

the*Alabama* on the morning of 10 August 1864.[179] A propeller steamer used the same tactic to outdistance the USS *Mount Vernon* on 29 August 1864. Following the discharge of a quantity of "heavy packages" the chase left the *Mount Vernon* "very fast" and within three hours was completely out of sight.[180]

A chase of the USS *Iroquois* lasted throughout much of the day and into the night of 17/18 August 1863. At sunset the Union steamer was gaining on the blockade runner in spite of more than 100 bales of cotton that had been thrown overboard. As the night was moonless, the vessel was able to lose her pursuer after sunset by reducing fuel to the boilers until the U. S. steamer passed and then steering another course.[181]

A "long, low, and narrow steamer with two masts and two smokestacks, very rakish build, and smokestacks painted a light lead color, nearly white" that resembled the *Banshee* "in every way" eluded capture by heading into thick mist on the horizon and immediately cutting back on coal to the boilers to stop producing telltale black smoke.[182]

Although speed was a critical element in late war success of blockade runners, slower vessels were still making successful runs in and out of Wilmington even in 1864. The USS *Britainnia* discovered a "side-wheel steamer, with one smokestack and two masts" leaving New Inlet shortly after midnight on 10 September 1864. Although the *Eolus* was not able to run the steamer down Acting Volunteer Lieutenant Samuel Huse reported that the vessel was "not going apparently over 8 knots per hour."[183]

At times when darkness, camouflage, ruse and speed were not sufficient to escape, the officers of blockade runners often resorted to running their vessels ashore under the protection of Confederate artillery. Once the vessel was ashore the cargo could be salvaged and on several occasions the vessels were refloated and towed into the Cape Fear for repair. To ensure that Union efforts to refloat grounded steamers were not successful, the vessels were often flooded and occasionally set afire. Paddlewheel shaft bearing caps were

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179 J. Trathen to S. P. Lee, 13 August 1864, *ORN*, I, 10, p. 383.
180 J. Trathen to S. P.Lee, 14 September 1864, *ORN*, I, 10, p. 428.
181 A. L. Case to S. P. Lee, 20 August 1863, *ORN*, I, 9, pp. 158-159.
182 W. H. Garfield to S. P. Lee, 15 August 1864, *ORN*, I, 10, p. 364.
183 C. Huse to S. P. Lee, 10 September 1864, *ORN*, I, 10, p. 451.

frequently removed to disable machinery. That quickly rendered the vessel's engines inoperable. In the event that circumstances permitted Confederate salvors to refloat the ship, they could be replaced in a matter of minutes.[184]

Confederate response to vessels aground was well orchestrated and produced highly satisfactory results throughout the war. The first significant attempt involved the *Modern Greece*. That steamer was run aground northeast of Fort Fisher during the summer of 1862. A salvage party under the direction of Colonel Leaventhorp landed a large quantity of the steamers cargo including ordnance, arms and ammunition and a variety of commercial freight.[185] That exercise and the experience gained unloading schooners and other sailing vessels through the surf provided Confederates with a formula for success that was enhanced throughout the war.

On 23 April 1863, Commander J. F. Armstrong of the USS *State of Georgia* attempted to destroy a vessel chased ashore north of Fort Fisher by the USS *Daylight*. When the USS *State of Georgia* and the USS *Florida* reached the grounded steamer, it was protected by two Whitworth field pieces recovered from the *Modern Greece*. Approximately two to three hundred men of the beach were in the process of lightening the vessel inspite of the surf breaking over the hull. Just as Commander Armstrong made signal to "Prepare for Battle", the grounded steamer backed off the beach and ran down the surf line toward Fort Fisher. Although the Union vessels gave chase the speed of the steamer and fire from the Whitworths, Confederate batteries on the coast north of Fort Fisher and the guns of Fort Fisher frustrated their efforts.[186]

When the Dudgeon twin screw steamer *Kate* was driven ashore on Smith Island in July 1863, the efforts of enterprising Confederate salvors surprised Union officers on the blockade. As soon as the steamer was aground it was abandoned by her officers and crew. They escaped to Smith Island in the vessel's boats. Union efforts to refloat the *Kate* proved fruitless and when Confederate infantry and artillery were reported to be advancing in force from the south side of the island, Commander Armstrong of the USS *State of*

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184 Watts, 1975 Field School Report and Watts, "Carolina Beach Inlet Shipwreck Assessment", Wilmington Corps of Engineers, 1985.

185 *Wilmington Journal*, 27 June 1862, p. 2, col.1., and 28 June 1862, p.2 col. 2.

186 J. F. Armstrong to S. P. Lee, 23 April 1863,*ORN*, I, 8, pp. 820-821.

Georgia ordered the steamer destroyed.[187] In addition to totally disabling the machinery the boilers were drained and the furnace doors closed with fires raging inside. The bonnets from the reservoirs were removed to flood the hull and the ship was set ablaze with four twenty pound charges of powder placed inside the hull. As the ship flooded and burned, IX and XI inch shells were fired into the hull.[188]

In spite of Union efforts to destroy the vessel, Assistant Paymaster H. E. McDuffie was able to make it through the surf to the wreck. With the assistance of two scouts from Fort Fisher and two civilians, McDuffie was able to extinguish the blaze and remove the charges placed in the hull. Once the fire was extinguished and the Union vessels had withdrawn out of range of Confederate artillery, Colonel Lamb boarded the vessel and posted armed guards to protect the vessel and surviving cargo.[189]

As the hull was found to have been struck by only two shot, Confederate salvors ascertained that the wreck could be refloated. At night using small boats they removed the cargo, shipping what could be sold to Wilmington and throwing the remainder overboard.[190] Much of the damaged machinery was also disassembled and thrown overboard and the engines salvaged to lighten the ship. Only the "boilers, bed plates, shafts and a quantity of coal" remained inside the hull.[191] On the night of 31 July, the hull was pumped out, the jib and main sail bent on and the vessel towed toward New Inlet by a number of small boats.

Upon being discovered and fired upon by the USS *Mount Vernon*, Confederate salvors were forced to abandon their prize. In hopes of defending the ship, the *Kate* 's anchors were let go under the protection of batteries at New Inlet. Under a "terrific" fire from Confederate artillery intent on sinking the *Kate*, a boarding party from the USS *Mount Vernon* took possession of the steamer and attached a hawser to the bow. After the anchor cables were slipped the USS *Mount Vernon* backed seaward with the prize in tow.[192]

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187 A. L. Case to S. P. Lee, 12 July 1863, *ORN*, I, 9, pp. 120-121.

188 A. L. Case to S. P. Lee, 13 July 1863, *ORN*, I, 9, pp. 120-121; J. E. DeHaven to A. L. Case, 12 July 1863, *ORN*, I, 9, p. 122; and C. E. Jack to J. E. DeHaven, 12 July 1863, *ORN*, I, 9, pp. 123.

189 *Wilmington Journal*, 13 August 1863, p. 1, col. 2.

190 *Wilmington Journal*, 6 August 1863, p. 1, col. 3.

191 L. A. Case to S. P. Lee, 2 August 1863, *ORN*, I, 9, pp. 142-143.

192 J. Trathen to S.P. Lee, 3 August 1863, *ORN*, I, 9, pp. 143-144.

On 11 August an inbound screw steamer went ashore on Caroline Shoals off New Inlet. Because the vessel was under the guns of Fort Fisher, little could be done to disrupt the work of Confederate salvors. Using tugs and small vessels, they quickly lightered or threw overboard most of the cargo. The North Carolina steamer *A. D. Vance* was also run aground on Caroline Shoals attempting to enter Old Inlet in August 1863. "By the aid of soldiers from the forts and of Colonel Crossan, who went down from Wilmington with a large work force, enough of the cargo was transferred to lighters to ease the vessel off the shoal." Colonel Thomas M. Jones, in command of Fort Caswell commended a group of coast guards of Captain John W. Galloway's company for saving goods that were washed overboard. In October 1863, a steamer was discovered ashore at Lockwoods Folly Inlet. The vessel had been run aground and the cargo entirely removed before being set ablaze. Only the hull and machinery remained and that was deeply buried in the sand.[193]

When a blockade runner was discovered ashore and ablaze off Lockwoods Folly Inlet on the morning of 3 January 1864, the USS *Fahkee* dispatched several boats to the wreck. Under the guns of the USS *Fahkee* the boarding parties attempted to refloat the steamer. Although that proved to be impossible they discovered that the vessel was the *Bendigo* and that her crew and Confederate salvors had removed the entire cargo from the wreck. The vessel had been scuttled prior to being set on fire and seven feet of water filled the engineering space and cargo holds.[194] When Confederate artillery was moved into position to command the *Bendigo*, the USS *Fahkee*'s boarding party was forced to withdraw and the Union gunboat fired into the wreck to destroy the hull and machinery.[195] The following week two additional vessels, the *Ranger* and the *Vesta* were also run ashore west of Old Inlet. The *Ranger* was run ashore by her pilot off Holdens Beach and the *Vesta* was run ashore off Sunset Beach. Although neither vessel could be refloated, material from both proved to be salvageable and Confederate troops continued to recover material from both vessels after they were declared total wrecks. Working under the

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193 A. D. Harrell to B. F. Sands, 5 October 1863, *ORN*, I, 9, p. 229.
194 S. P. Lee to G. Welles, 4 January 1864, *ORN*, I, 9, pp. 385-386.
195 *Ibid.*

protection of darkness and "thick weather", Confederate salvors recovered tools and rifled muskets from the *Ranger* and the Parrott rifle thrown overboard from the USS *Iron Age*.[196]

The *A. D. Vance* ran aground again attempting to enter the Cape Fear through Old Inlet on 20 January 1864. Fortunately, the vessel was protected by the guns of Fort Caswell and Fort Holmes on Smith Island. Large tugs and steamers were quickly dispatched to lighter the cargo and pull the vessel into deep water. Although it took almost two days the operation was successful and both vessel and cargo were saved.[197]

When the *Wild Dayrell* went aground in Rich Inlet on 1 February 1864, the crew threw overboard as many packages of merchandise, shoes, blankets and provisions as possible and set the ship on fire before being discovered and chased away by the USS *Sassacus*. Much of what they were able to throw overboard floated to the beach and was recovered.[198] Because the wreck was above Masonboro Inlet, Confederate forces could not protect the steamer by bringing artillery up the beach to drive Union vessels away from the wreck. When the USS *Florida* returned to the wreck on 5 February, a battery of rifled Whitworth cannon opened fire from the mainland hitting the vessel wounding one member of the crew.[199]

When Lieutenant Wilkinson was ordered to Wilmington in March 1864 one of his duties was to:

> procure boats and will render such aid in saving life and Government stores from stranded vessels as your means and opportunities may admit. To aid in the execution of these duties, I have requested the Secretary of War to order a transfer of such men as you may require from the military force at or near Wilmington; and I have supposed that 20 men for your lights and signals and 50 for other duty would meet your wants, and you will designate the men you require.[200]

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196 W. G. Saltonstall to S. P. Lee, 2 February 1864, *ORN*, I, 9, pp. 436-437.
197 S. P. Lee to G. Welles, 6 February 1864, *ORN*, I, 9, p. 413.
198 F. A. Roe to S. P. Lee, *ORN*, I, 9, pp. 438-439.
199 P. Crosby to S. P. Lee, 5 February 1864, *ORN* I, 9, pp. 460-461.
200 S. R. Mallory to J. Wilkinson, 11 March 1864, *ORN*, I, 9, pp.804-805.

Perhaps as a consequence of Lt. Wilkinson's work, the results were quite different when a steamer resembling the *A. D. Vance* was run ashore on the western point of Oak Island in March 1864. On 14 March, Acting Volunteer Lieutenant Edward F. Devens of the USS *Aries* reported:

> At 5 a. m. saw a steamer bearing north from night station No. 7, which station was occupied for the night by this vessel; stood in to cut her off, when she ran upon the beach, about 1 mile below Fort Campbell. Got the boats ready to board her, when we saw a large number of troops and several pieces of artillery coming down the beach from the direction of the fort. At 5:20 a. m. opened fire on her; at the same time rebels opened fire on us from the beach above and below the steamer with several Whitworth guns, the shell all falling close to us or going over us. At 6:10 a. m., having had reason to believe two shells had struck her, one through the bow and one through her just forward of the wheel house, I deemed it prudent to withdraw....[201]

During the night Confederate troops garrisoned at Fort Campbell and Fort Caswell helped lighten the steamer and tugs from Smithville were able to pull the vessel into the Cape Fear.[202] According to the 26 May 1864 *Wilmington Journal* the vessel was the steamer *Lucy* under the command of Captain Duguid. Captain Duguid ordered the vessel flooded to frustrate any attempt to pull the *Lucy* off by Union ships.[203]

Confederate salvors from Fort Fisher were also able to recover the steamer *Badger*. That vessel was run aground off Fort Fisher in July 1864. Although determined to be a "total loss" the hull was plugged and pumped out, coal and cargo removed and the vessel towed into the Cape Fear.[204] The *Badger* was ashore on Caroline Shoals for nine days before the hull and machinery could be salvaged.[205] The USS *Emma* drove the paddlewheel steamer *Elsie* ashore on Oak Island west of Fort Caswell on 26 August 1864, but was unable to destroy the vessel due to the combined fire from Fort Caswell,

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201 E. F. Devens to S. P. Lee, 14 March 1864, *ORN*, I, 9, pp. 551-552.
202 J. M. Frailey to S. P. Lee, 15 March 1864, *ORN*, I, 9, p. 551.
203 *Wilmington Journal*, "Gallant but Bloodless Attack by the Blockading Squadron", 26 May 1864.
204 S. P. Lee to G. Welles, 26 August 1864, *ORN*, I, 10, pp. 390-391.
205 T. C. Dunn to S. P. Lee, 26 August 1864, *ORN*, I, 10, pp. 393-395.

Fort Campbell and batteries on the beach. Confederate salvors were able to repair the USS *Emma*'s shot damage and using two schooners, lighten the vessel. It steamed into the Cape Fear River the following day.[206]

On the night of 29 September 1864, the steamer *Night Hawk* was driven aground on Caroline Shoals off New Inlet by the USS *Niphon*.[207] Although the wreck was under the guns of Fort Fisher, a boarding party from the *Niphon* set the vessel ablaze and took off most of the officers and crew before the Confederate garrison drove them from the stranded vessel.[208] Because the *Night Hawk* was within range of Fort Fisher, Confederate salvors began to recover material from the vessel as soon as the weather permitted. Before the vessel could be salvaged however, the *Condor* attempted to enter New Inlet and ran aground trying to avoid the wreck of the *Night Hawk*. Again the guns of Fort Fisher prevented the destruction of the blockade runner.[209] Although the cargo of the *Condor* was saved by the quick work of the Fort Fisher garrison the vessel became a complete wreck before Colonel Lamb's proposal to "take the *Condor* off" could be effected.[210] That same storm helped free the hull of the *Night Hawk* and with the assistance of Negro slaves the vessel was brought inshore, the remains of her cargo removed and with the boilers fired up the burned out hull was brought into the Cape Fear.[211] After being repaired and rebuilt at Wilmington the *Night Hawk* ran out again on 3 January 1865.[212]

By October 1864, the salvage of vessels ashore off Fort Fisher required so much attention from the garrison that Major-General Whiting complained: "My men, who ought to be at their work and at their drill, have been transformed into boatmen and wreckers, and at night have to stay in these wrecks to keep off the enemy's boats."[213] When the *Stormy Petrel* went ashore in December 1864, it was on the south breaker on Caroline Shoals. The wreck was within the limits of Fort Fisher's protection but, was also within range of

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206 J. M. Williams to B. F. Sands, 26 August 1864, *ORN*, I, 10, p. 402; S. P. Lee to G. Welles, 1 September 1864, *ORN*, I, 10, pp. 413-414 and T.C. Dunn to S. P. Lee, 6 September 1864, *ORN*, I, 10, pp. 426-427.

207 E. Kemble to O. S. Glisson, 30 September 1864, *ORN*, I, 10, p. 493.

208 *Ibid.*

209 E. Kemble to O. S. Glisson, 1 October 1864, *ORN*, I, 10, p. 532.

210 Colonel Lamb's Diary, "Memoranda", 1 November 1864, College of William and Mary.

211 Wise, *Lifeline*, p. 198.

212 Colonel Lamb's Diary, 3 January 1865, College of William and Mary.

213 W. H. C. Whiting to J. A. Seddon, 11 October 1864, *ORN*, I, 10, pp. 781-782.

the Union blockaders. Although they could not destroy the *Stormy Petrel*, they shelled the steamer until they were driven away by the fort's artillery. The following day Power, Low and Company sent down 50 Negros to assist the garrison in recovering the *Stormy Petrel*'s cargo. Unfortunately a northeast gale prevented salvaging material from the wreck and the steamer was beaten to pieces in heavy surf. Although most of the freight aboard the steamer was destroyed, Colonel Lamb dispatched two boats to recover cloth from the wreck on 14 December. They returned filled with material for the garrison. The *Stormy Petrel* was the last blockade runner to go aground under the protection of Fort Fisher but vessels continued to run into the Cape Fear until news of the fall of Wilmington reached Bermuda, Nassau and Halifax.[214]

Although no comprehensive strategy was formally developed for Anglo-Confederate blockade running, the collective response to demands of the trade produced an effective system for maintaining foreign commerce. The techniques that were employed to circumvent the blockade proved to be efficient enough to keep a sometimes sporadic but uninterrupted supply of war materials and civilian goods flowing into Wilmington until the Cape Fear was closed by occupation in January 1865. Although a deliberate program of blockade running would unquestionably have been more effective, the strategies that evolved helped Anglo-Confederate blockade runners provide both the necessities of war and the essentials of civilian society in spite of the efforts of the United States Navy.

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214 Colonel Lamb's Diary, 7, 8, 9 and 14 December 1864, College of William and Mary.

Chapter V Location, Identification and Description of the Wrecks

As a consequence of blockade running during the American Civil War, the coastal waters of southeastern North Carolina contain the remains of more than thirty steam vessels associated with that clandestine trade. Those wrecks lie in the shallow waters off the barrier islands or in the shallow inlets that separate those islands. The wreck sites are scattered from Bogue Bank west of Topsail Inlet in the north down the coastline to Cape Fear and west to Shallotte Inlet (Figure 3). Those vessels include the *Modern Greece* and *Kate* lost in 1862, the *Hebe, Phantom, Arabian, Elizabeth, Douro, Venus, Beaureguard* and *Herald* lost in 1863 and the *Bendigo, Ranger, Vesta, Wild Dayrell, Dee, Spunkie, Emily, Fanny & Jenny, Georgiana McCaw, Pevensey, Lynx, Ella, Stormy Petrel* and *Agnes E. Fry* lost in 1864. Two blockade runners, the *Columbia* and *Peterhoff*, that were captured and taken into service by the United States Navy were also lost on the North Carolina coast.

The first efforts to locate, identify and recover material from those wrecks were carried out during the Civil War Centennial in the 1960s. The impetus of those early investigations was a result of the highly publicized salvage of material from one wreck in particular. In 1962, divers from the United States Navy Explosive Ordnance Disposal Unit at Indian Head, Maryland discovered that a storm had uncovered the remains of the blockade runner *Modern Greece*. On exploring the wreck they found that much of the ship's cargo had not been salvaged during the war. When word of the discovery reached the North Carolina Department of Archives and History, divers were rapidly recovering the valuable cargo. At the request of the Governor of North Carolina the United States Navy agreed to assist in recovering the remaining artifacts from the wreck. During two summer projects more than ten thousand artifacts were recovered. Although no archaeological provenience was maintained, the number of artifacts recovered, more than ten thousand, was impressive.[1]

Work on the *Modern Greece* stimulated interest in locating other blockade runners. With assistance from local divers and historian Charles Foard, the Navy located and examined several additional vessels including the

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[1]Leslie Bright, *The Modern Greece and Her Cargo*, NCDAH, 1977.

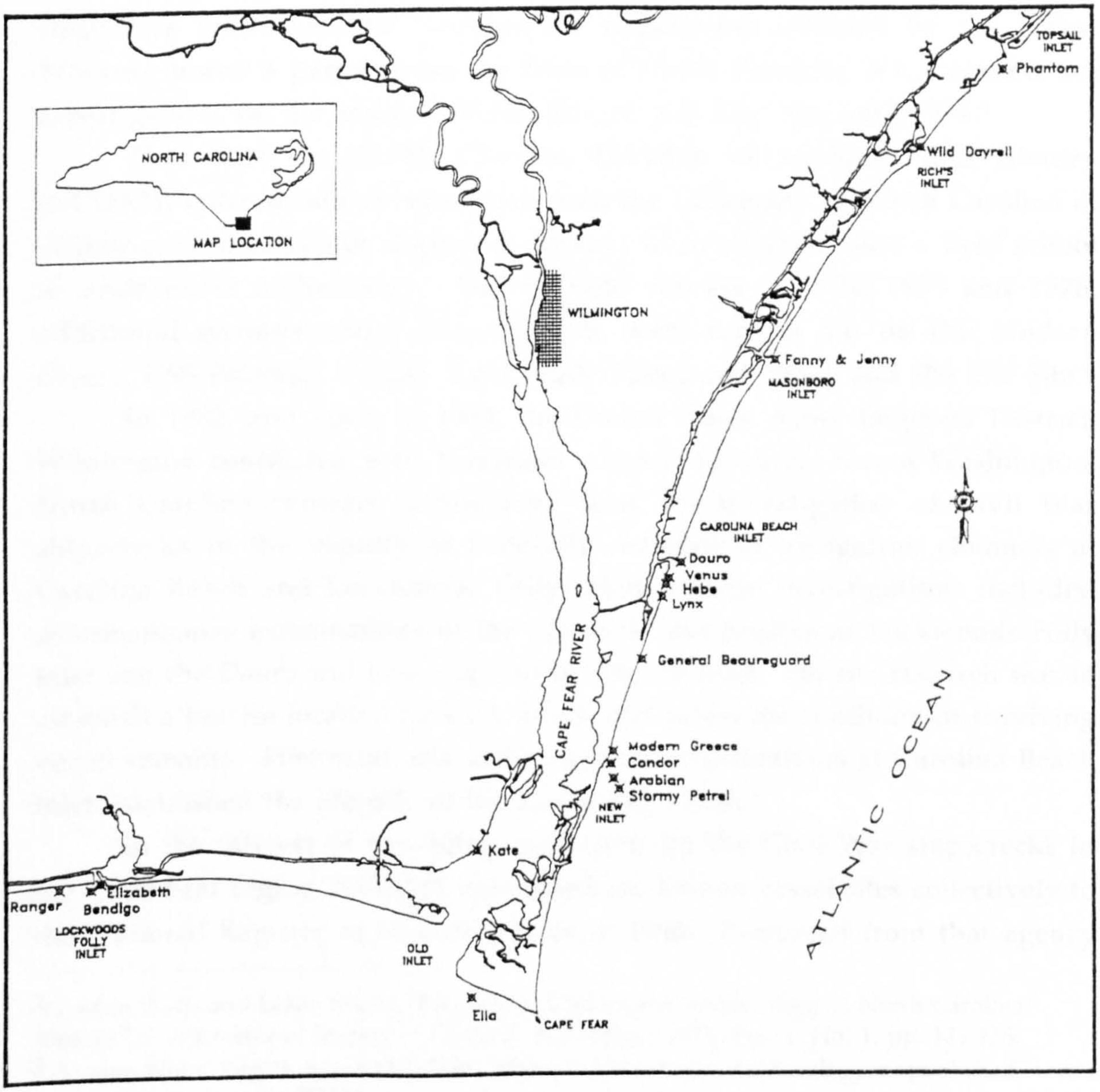

Figure 3. North Carolina Coast Civil War Shipwreck Locations.

USS *Peterhoff, Condor, Beaureguard, Phantom, Ranger* and a wreck traditionally identified as the *Ella*.[2] The location of these wrecks and recovery of artifacts focused additional attention on North Carolina's Civil War shipwrecks. The formation of Nautical Archaeological Associates (NAA), a not-for-profit organization, provided the vehicle for a small group of Civil War shipwreck enthusiasts to continue the exploration initiated by the Navy. Working under a permit from the State of North Carolina, NAA carried out investigations on the *Modern Greece, Ranger,* and *Ella* Site until 1974.[3]

That year the North Carolina Division of Archives and History (NCDAH) entered into an agreement with the University of North Carolina at Wilmington to carry out shipwreck surveys in conjunction with a field school in underwater archaeology. During field schools in 1974, 1975 and 1976, additional reconnaissance investigations were carried out on the *Modern Greece,* USS *Peterhoff, Condor, Lynx, Hebe, Fanny and Jenny,* and the *Ella* Site.[4]

In 1982, and again in 1984, the United States Army Engineer District, Wilmington contracted with Tidewater Atlantic Research, Inc., a Washington, North Carolina contract archaeology firm, for investigation of Civil War shipwrecks in the vicinity of Federally maintained navigation channels at Carolina Beach and Lockwoods Folly inlets. Those investigations included reconnaissance examinations of the *Elizabeth* and *Bendigo* at Lockwoods Folly Inlet and the *Douro* and *Venus* at Carolina Beach Inlet. On-site research was to establish a precise location for each wreck and assess the condition of surviving vessel remains. Historical and archaeological investigations at Carolina Beach Inlet established the identify of the *Douro* and *Venus*.[5]

In the interest of providing protection for the Civil War shipwrecks in the Cape Fear region, NCDAH nominated the known vessel sites collectively to the National Register of Historic Places in 1985. Personnel from that agency

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[2]Gordon Watts and Leslie Bright, "Progress in Underwater Archaeology in North Carolina, 1962-1972." *International Journal of Nautical Archaeology,* 1973, Vol. 2, No. 1, pp. 131-136.

[3] Gordon Watts, Report on the 1974 Field School in Underwater Archaeology, unpublished manuscript on file at NCDAH.

[4]*Ibid.*

[5]Gordon Watts, "Underwater Archaeological Reconnaissance, Carolina Beach Inlet, New Hanover County, North Carolina" Report submitted to the Wilmington District, U. S. Army Corps of Engineers by Tidewater Atlantic Research, August 1984 and Gordon Watts, "Underwater Archaeological Reconnaissance and Historical Investigation of Shipwreck Sites in Lockwoods Folly Inlet, Brunswick County, North Carolina" Report submitted to the Wilmington District, U. S. Army Corps of Engineers by Tidewater Atlantic Research, 15 August 1986.

also initiated a series of reconnaissance investigations to collect additional data on the wrecks and document their condition.[6] Those activities were expanded in 1989 when East Carolina University's Program in Maritime History and Nautical Archaeology (PMHNA) and the Underwater Archaeology Unit of NCDAH carried out a survey of Cape Fear Civil War shipwrecks in conjunction with a Field School in Maritime History and Underwater Archaeology. During that field school twelve sites were examined and reconnaissance level site plans were developed.[7]

Between 1983 and 1986 the staff and students of PMHNA also joined the Bermuda Maritime Museum in investigating the wrecks of two blockade runners lost in Bermuda (Figure 4). In 1983, archaeological investigation concentrated on the wreck of the *Mary Celestia*. A preliminary plan of the site was prepared and exposed hull structure and machinery documented. Three years later in the fall of 1986, a less comprehensive reconnaissance was carried out on the remains of the *Nola*. Archival resources in the Bermuda Archives and the collections of the Hamilton Library and St. Georges Historical Society were surveyed to identify material associated with the wrecks.[8]

The remains of blockade runners lost in the immediate vicinity of New Inlet off Fort Fisher was also carried out by the staff and students of PMHNA and the Underwater Archaeology Unit in 1994 and 1995. That research was funded by the National Park Service and was designed to document the remains of Union warships and blockade runners geographically associated with Fort Fisher. Survey activities focused on the wrecks of the blockade runners *Condor, Arabian, Modern Greece* and *Stormy Petrel.* Data from the survey supported identification of the wrecks, development of management plans and assessment of their suitability for development as an underwater park.[9]

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6 Richard Lawrence, *et. al.*, National Register of Historic Places Nomination for Cape Fear Civil War Shipwreck District, NCDAH, 1985.

7 Gordon P. Watts, Jr., Report on the 1989 Field School in Underwater Archaeology, unpublished manuscript on file at East Carolina University.

8 Watts, Gordon P., Jr. "Bermuda in the American Civil War: A Reconnaissance Investigation of Archival and Submerged Cultural Resources." *International Journal of Nautical Archaeology,* Vol. 17, No. 2, 1988, pp. 159-171 and Watts, Gordon P., Jr., "Runners of the Union Blockade." *Archaeology,* Vol. 42, No. 5, September/October, 1989, pp. 32-39.

9 Gordon Watts, *et. al.*, "A Reconnaissance Investigation of the Civil War Shipwrecks at New Inlet" a draft report on file at East Carolina University, 1996.

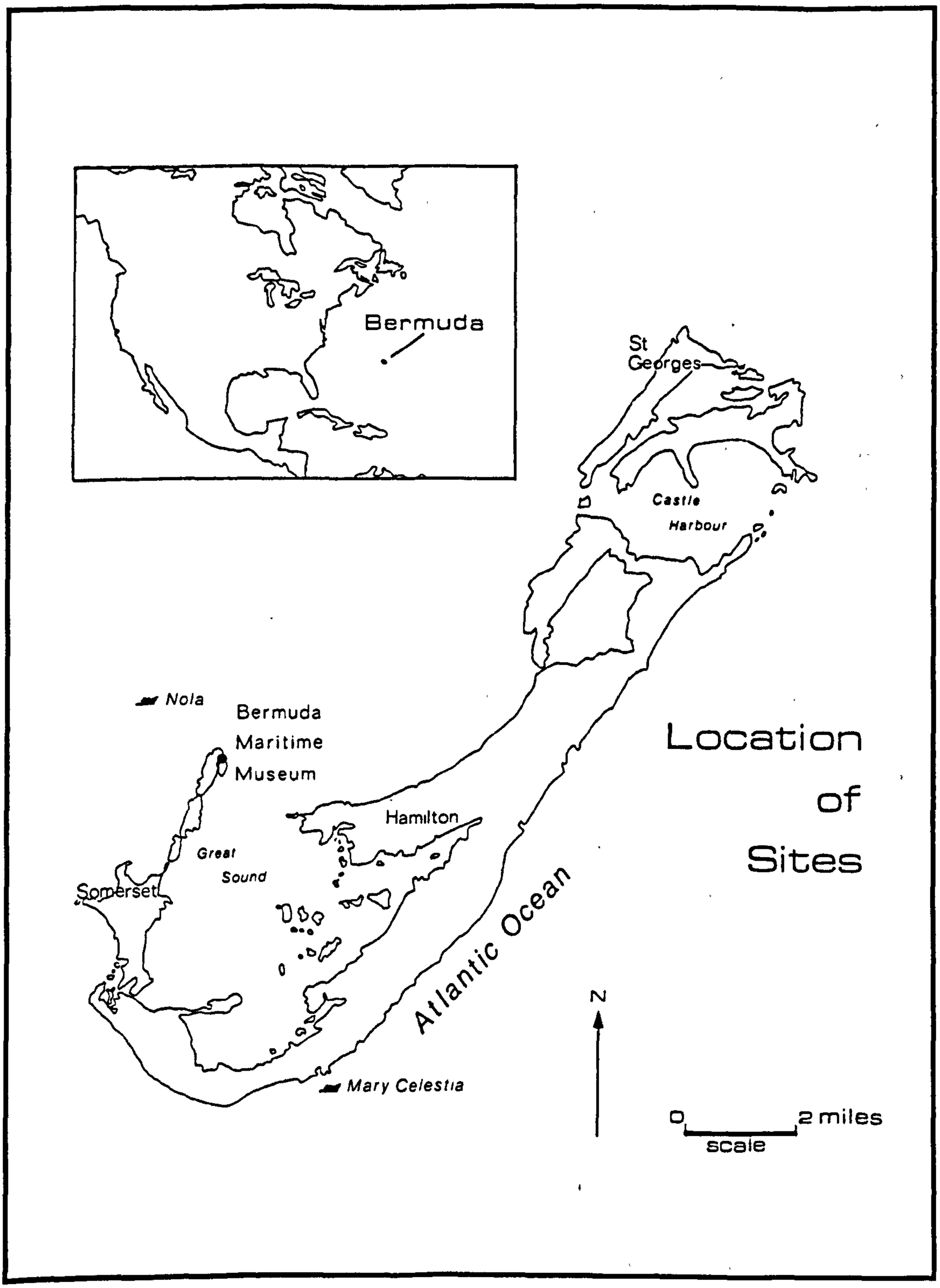

Figure 4. **American Civil War Shipwreck Locations in Bermuda.**

During the past thirty years of salvage and archaeological research, eighteen wrecks have been located, identified and to some degree investigated in North Carolina and two have been examined in Bermuda. In North Carolina those vessels include the *Modern Greece* and *Kate* lost in 1862, the *Hebe, Phantom, Arabian, Elizabeth, Douro, Venus* and *Beaureguard* lost in 1863 and the *Bendigo, Ranger, Wild Dayrell, Dee, Fanny & Jenny, Lynx, Ella* and *Stormy Petrel* lost in 1864. In Bermuda, the wrecks of the *Nola,* lost in 1863 and the *Mary Celestia,* lost in 1864, have been examined and documented.

Those wrecks represent the entire spectrum of steam powered blockade runners employed in circumventing the Union blockade. Identification of the wrecks has been based on geographical location, historical data and comparing surviving design, construction and engineering data with the vessel remains. With the exception of the wreck traditionally identified as the *Ella,* the remains of each vessel were found to have sufficient diagnostic characteristics to permit reliable identification.

Modern Greece

Date of Loss	27 June 1862	
Location of Wreck	**Longitude 77° 54' 37"**	**Latitude 33° 58' 38"**

The wreck of the *Modern Greece* lies one half mile northeast of Fort Fisher and one quarter mile offshore (Figure 3). Surviving vessel structure rests on a coquina rock and sand bottom in 30 feet of water. The hull lies parallel to the beach with the bow to the south. Exposed remains of the *Modern Greece* consist of intact sections and disarticulated fragments of the hull structure and the vessel's machinery and boiler.

Identification of the *Modern Greece* is based on a combination of site location and the surviving hull structure. The location of the wreck of the *Modern Greece* was well established at the time of her loss on 27 June 1862. Historical sources confirm that the ship was run aground off the beach one half mile northeast of Fort Fisher. The remains are those of a large iron single screw steamer. Although the overall length of the hull is difficult to establish because of deterioration of the structure, the overall length of the wreck is sufficient to accommodate the 224 foot length of the *Modern Greece* recorded

on the Certificate of British Registry (CBR).[10] The 29 foot 6 inch beam and 32 foot 6 inch length of the engine room recorded at the wreck site correspond closely with those recorded on the CBR and an Annual Survey carried out 7 October 1861 at London.[11]

One curious disparity concerns the number of engines (steam cylinders) on the *Modern Greece.* The CBR records that there were three engines. Evidence at the site confirms the remains of only one engine. However, historical sources suggest that one or more of the engines of the *Modern Greece* may have been removed for use in one of the ironclads being built in Wilmington in 1862. In a report to Major-General H. W. Halleck, Major-General J. G. Foster suggested that engines "from the *Modern Greece* and the *Uncle Ben*" were to power the *North Carolina* and *Raleigh*.[12] The *Modern Greece* was also known to have a donkey engine but it is unlikely that it would have been counted along with the propulsion plant cylinders. The remains of the *Peterhoff,* another Z. C. Pearson steamer sunk southeast of Fort Fisher, has two engines listed on the CBR and two direct acting vertical cylinder steam engines were identified in the remains of the vessel.[13]

The hull of the *Modern Greece* has broken into three distinct elements. Those include the bow, engineering space amidships and stern (Figure 5). A 38 foot long section of the bow lies virtually upright on the bottom and extends more than 10 feet into the water column. That section extends from the lower stem to the forward bulkhead. Aft of the forward bulkhead, the hull has collapsed to the turn of the bilge and sections of plate and frames from the sides of the hull lie on the bottom adjacent to the hull. Deck beams and small sections of the deck clamps lie on the sand within the confines of the surviving lower hull structure.

Aft of the forward cargo hold the remains of a second watertight bulkhead identify the forward extent of the engineering space. That section of the wreck is characterized by a 32 foot long section of the lower hull remains. The forward section of the engineering space contains the remains of a single boiler. The boiler is 9 feet 4 inches in length and 18 feet 6 inches in width. The

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10Certificate of British Registry, 2 August 1859, *Modern Greece*, BT108-6, PRO.

11Lloyds, Annual Surveys, No. 3262, *Modern Greece*, Hull, NMM, London.

12 J. G. Foster to H. W. Halleck, 11 October 1862, *ORA*, I, 18, p. 416 and D. L. Braine to G. H. Scott, 22 September 1862, *ORN*, I, 8, pp. 87-88.

13Watts, Report on the 1989 Field School, manuscript on file at East Carolina University.

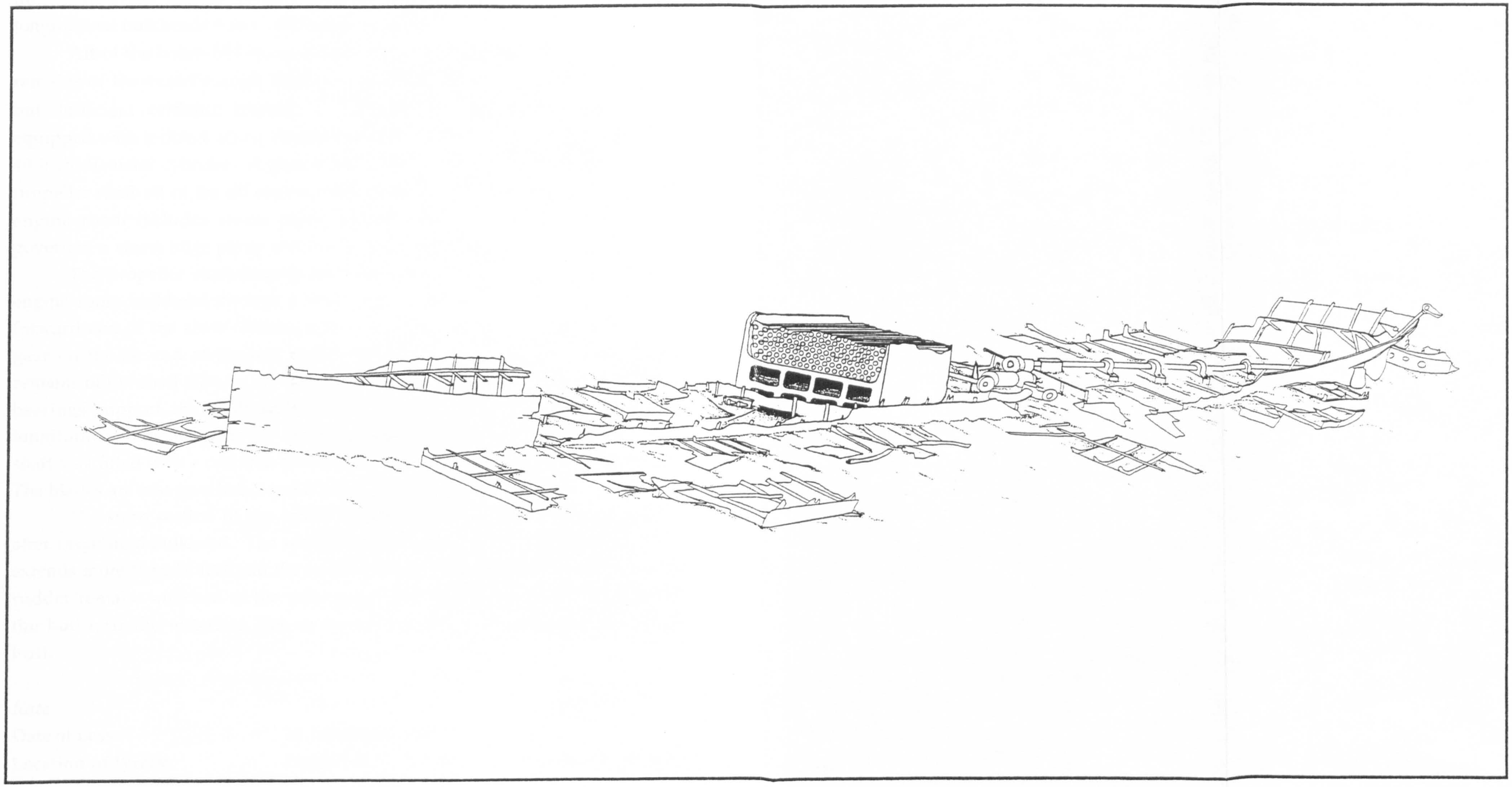

Figure 5. Illustration of the Remains of the *Modern Greece.*

design is based on fore and aft fire tubes that pass through the water chamber. A 5 foot wide space between the boiler and the bulkhead provided access to the fire boxes and ash pits. Coal bunkers were constructed along the sides of the hull within the engine room and their remains survive in the form of longitudinal bulkheads 4 feet inboard of the hull.

Aft of the boiler 18 feet of additional engineering room space contain the remains of the vessel's steam machinery. The machinery has been destroyed, but sufficient evidence remains to confirm that the *Modern Greece* was equipped with a direct acting double cylinder vertical engine with at least one 40 inch diameter cylinder. A geared jack shaft connected the crankshaft to the propeller shaft aft of the aft engine room bulkhead. Additional material in the engine room includes steam pipes, valves, engine eccentrics, parts of the governor, a steam bilge pump and the remains of the air pump and condenser.

The propeller shaft extends aft from a point immediately aft of the aft engine room bulkhead through a shaft alley under the after cargo hold. The forward end of the shaft contains a 36 inch diameter gear that meshed with a gear on the aft end of the jack shaft. The shaft extends 91 feet through the remains of the shaft alley to the sternpost and packing gland. Four pillow block bearings support the shaft and a thrust bearing was employed to prevent longitudinal movement of the shaft during operation. Outside the hull the shaft was fitted with a cast iron two blade propeller 13 feet 4 inches in diameter. The blades are cast on a hub 2 feet 8 inches in length.

The stern section of the wreck consists of 34 feet of the hull aft of the after cargo hold bulkhead. The section lists heavily to port and the rudder post extends more than 28 feet into the water column. The 14 foot long blade of the rudder remains attached to the stern post. The fantail, which separated from the hull near the waterline, lies on the bottom aft of the stern section of the hull.

Kate

Date of Loss	18 November 1862	
Location of Wreck	**Longitude** 77° 59' 46"	**Latitude** 33° 55' 35"

The wreck of the *Kate* lies in the Cape Fear River one half mile south of Price's Creek and one eighth mile offshore (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 20 feet of water. The hull

remains are oriented parallel to the west bank of the river with the bow to the south. Exposed remains of the *Kate* consist of the boiler, the largest feature of the wreck, brick from the boiler bed and disarticulated wooden fragments of the hull structure (Figure 6). Machinery from the vessel was salvaged during the Civil War.

Identification of the *Kate* is based on the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the Cape Fear River near Smithville after hitting a snag or obstructions.[14] Nineteenth century cartographic sources indicated that a wreck was located near the west bank of the Cape Fear south of Price's Creek.[15] The location of the wreck one half mile south of Price's Creek corresponds favorably with that general description of the area of loss. Exposed remains at the site are those of a small wood hull steamer. Although the dimensions of the hull have been impossible to establish because of deterioration of the structure, one of the artifacts recovered from the site during a survey carried out by the NCDAH Underwater Archaeology Unit confirmed identification of the wreck. That artifact was a large fragment of British ironstone china plate with a transfer printed design that includes a snake that encircles a palmetto tree and the name "Carolina".[16] *Carolina* was the name of the steamer before being changed to *Kate* in December 1861.

Hebe

Date of Loss	18 August 1863	
Location of Wreck	**Longitude** 77° 52' 35"	**Latitude** 34° 03' 58"

The wreck of the *Hebe* lies in the Atlantic Ocean one half mile south of Carolina Beach Inlet and 700 feet offshore (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 16 feet of water. The hull remains are oriented perpendicular to the shoreline with the bow inshore to

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14 S. P. Lee to Gideon Welles, *ORN*, I, 8, p. 260., and *North Carolina Standard*, 26 November 1862.

15 U. S. Coast Survey, Chart No. 1103, 1872.

16 Glenn C. Overton and Richard W. Lawrence, "A Maritime History and Survey of the Cape Fear and Northeast Cape Fear Rivers, Wilmington Harbor, N. C.," Vol. 2 : Submerged Cultural Resources Survey, manuscript on file with NCDAH, 2 Vols., NCDAH, 1996.

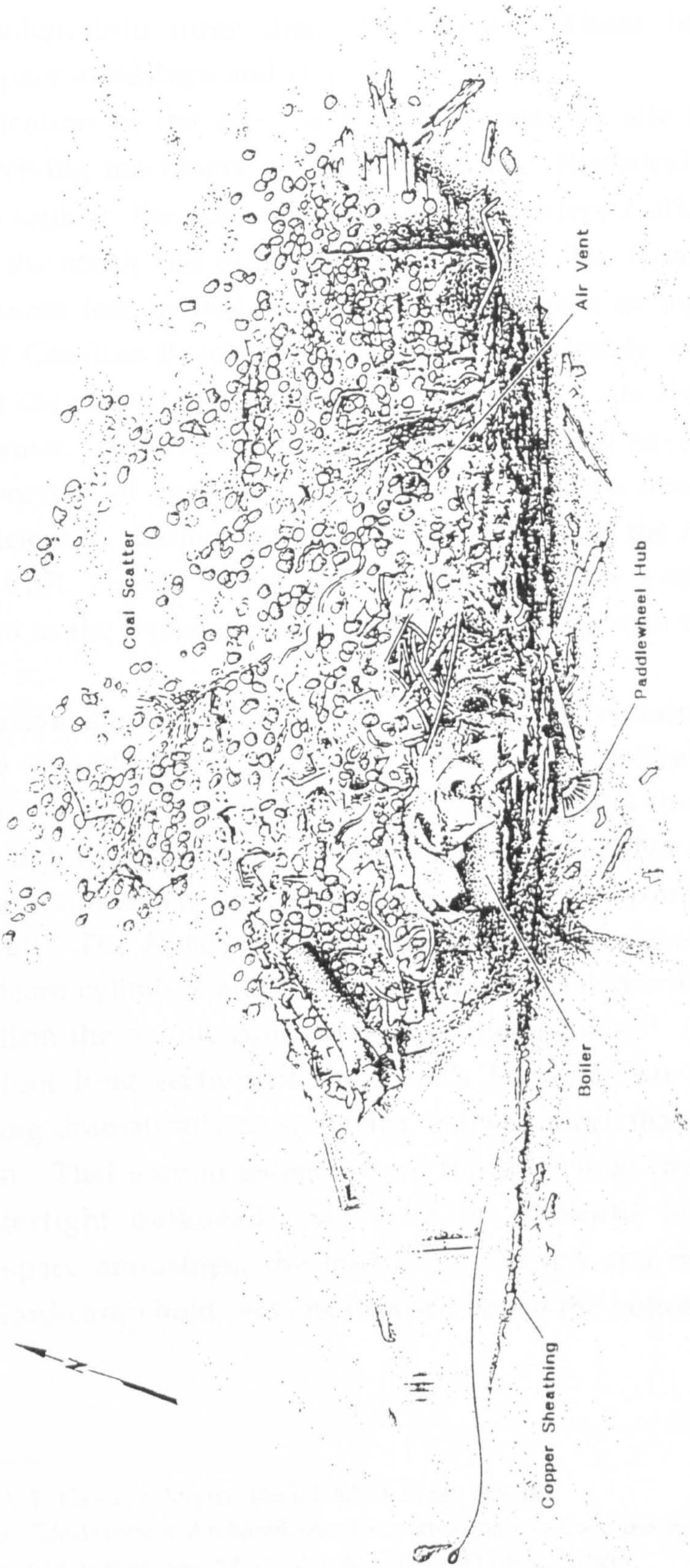

Figure 6. Illustration of the Remains of the *Kate* (*Carolina*), NCDAH.

the west northwest and the stern offshore to the east southeast. The hull of the *Hebe* has broken into three distinct elements. Those include the bow, engineering space amidships and stern.

Identification of the *Hebe* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Battery Gatlin constructed in the dunes at the south end of Masonboro Sound.[17] The *Hebe* was one of four blockade runners lost in that vicinity.[18] The location of the wreck one half mile south of Carolina Beach Inlet corresponds favorably with the historical description of the area of loss. Exposed remains at the site are those of a small steel hull steamer. Although the dimensions of the hull have been impossible to establish because of deterioration of the structure, the overall length of the wreck is sufficient to accommodate the 176 foot length of the *Hebe* recorded on that vessel's CBR. The 22 foot 6 inch beam and 39 foot length of the engine room recorded at the wreck site also correspond closely with those recorded on the CBR.[19]

Conclusive identification of the wreck as the remains of the *Hebe* is based on the vessel's steam machinery (Figure 7). Unlike the other ships, *Douro, Venus* and *Lynx*, lost in the vicinity, the *Hebe* was the only twin screw vessel. Although the screws are not exposed, both propeller shafts are visible. Both shafts are connected to twin-cylinder horizontal trunk engines located low in the hull. The *Hebe*'s CBR confirms that the vessel contained four engines, or steam cylinders and historical data associated with other vessels of the class confirm the unique configuration of the engines.[20]

A 14 foot long section of the *Hebe*'s bow lies on the bottom, and although listing dramatically to starboard, extends more than five feet into the water column. That section extends from the stem near the waterline to the forward watertight bulkhead. Between the forward bulkhead and the engineering space amidships, the hull has collapsed and nothing associated with the forward cargo hold remains exposed above the bottom surface.

17J. B. Breck to A. L. Case, 18 August 1863, *ORN*, I, 9, pp. 166-167.
18Gordon Watts, "Underwater Archaeological Reconnaissance, Carolina Beach Inlet," 1984.
19 Certificate of British Registry, 27 April 1863, *Hebe*, BT108-10, PRO.
20*The Engineer*, 1 May 1863, p. 252.

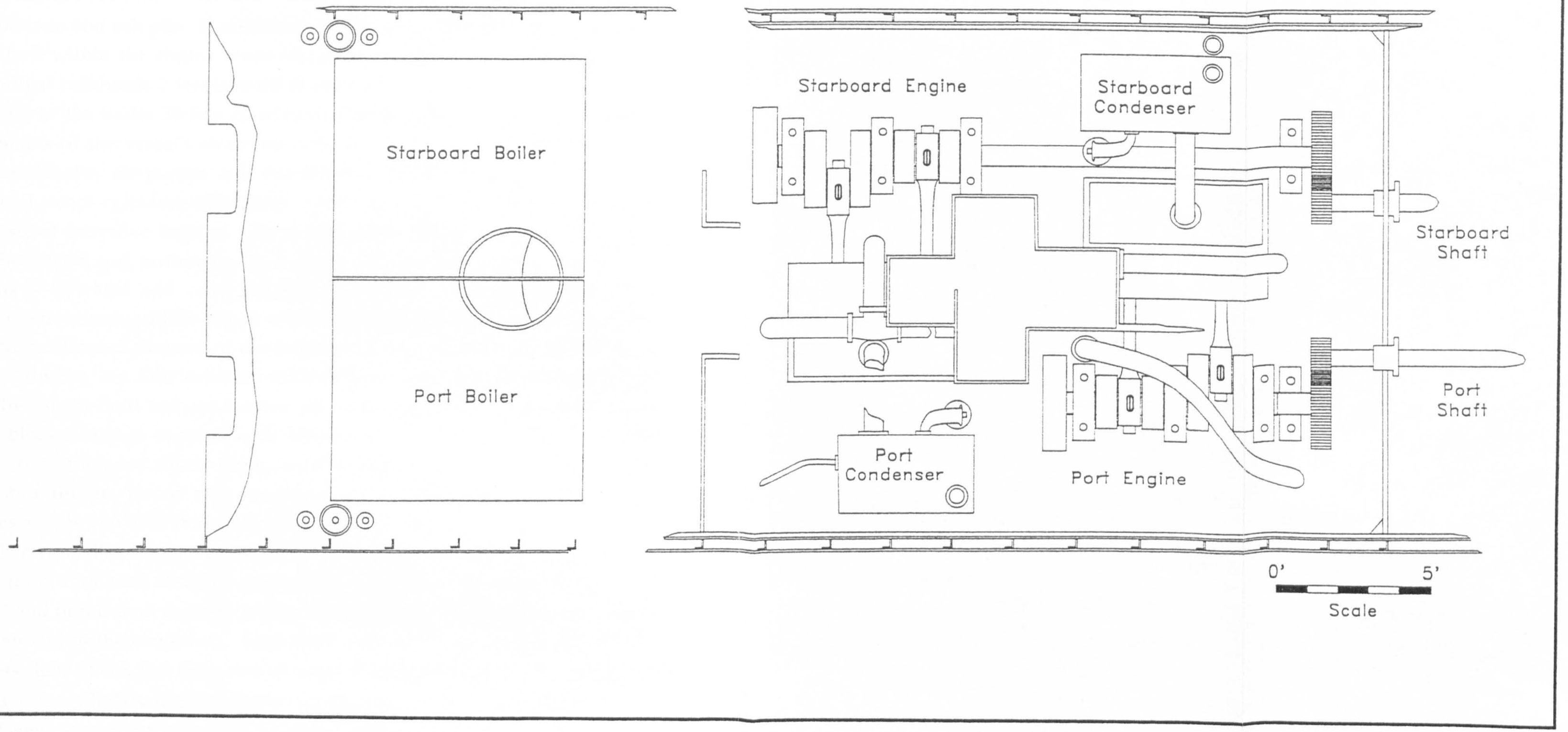

Figure 7. Plan of the Engineering Space of the *Hebe*.

Forty-five feet east southeast of the bow, the vessel's engineering space is characterized by a 46 foot long section of the lower hull remains. That section extends from a bulkhead three feet forward of the boiler to the aft engine room bulkhead 36 feet 6 inches aft of the boiler. The forward section of the engineering space contains the remains of a common flue double boiler. The boilers are 10 feet 8 inches in length and 19 feet 6 inches in width. The design is based on fore and aft fire tubes that pass through the water chamber. A 5 foot wide space between the boiler and a coal bunker bulkhead provided access to the fire boxes and ash pits. Coal bunkers were also constructed along the sides of the hull within the engine room and their remains survive in the form of longitudinal bulkheads 2 feet inboard of the hull.

Aft of the boiler 30 feet of additional engineering room space contains the remains of the vessel's steam machinery. That space contains the steam cylinders, shafts, air pumps and condensers. Each engine consists of two horizontal steam cylinders with piston rods attached to a crankshaft with bell cranks set at forty-five degrees. The crank shafts extend aft to the aft engine room bulkhead and terminates in a gear. The forward end of each shaft contains a flywheel and cams for the eccentrics. The port engine steam cylinders are oriented athwartships with the pistons along the centerline of the hull and are located forward of the starboard steam cylinders. The starboard steam cylinders are also oriented athwartships with the pistons along the centerline of the hull but are located aft of the port steam cylinders. Four pillow block bearings support each crankshaft. Additional material in the engine room includes steam pipes, valves, engine eccentrics, a steam bilge pump and the air pump and condenser for each engine. An iron plate provides a walkway over the steam machinery.

The propeller shafts extend aft from a point immediately aft of the aft engine room bulkhead through shaft alleys under the after cargo hold. The forward end of the shaft contains a large diameter gear that meshed with a gear on the aft end of the crankshaft. Each shaft extends aft but disappears into the sand less than fifteen feet from the aft engine room bulkhead. The hull aft of the engine room bulkhead has collapsed to the level of the bottom surface.

Twenty-seven feet aft of the aft engine room bulkhead the hull structure is exposed on the starboard quarter. That exposed section of hull extends aft to the sternpost and rudder. The stern section of the wreck consists of 31 feet of structure. The section lists slightly to starboard and the rudder post extends 4

feet into the water column. The rudder remains attached to the sternpost. The fantail, which separated from the hull near the waterline, lies aft of the stern section of the hull almost completely covered by sediment.

Arabian

Date of Loss 15 September 1863

Location of Wreck **Longitude** 77° 54' 38" **Latitude** 33° 57' 46"

The wreck of the *Arabian* lies on the northern extremity of Caroline Shoals north of the historic location of New Inlet and southeast of Fort Fisher (Figure 3). Surviving vessel structure rests on a silt, sand and shell hash bottom in 25 feet of water. The wood hull of the *Arabian* has deteriorated leaving no structural remains exposed above the level of the bottom surface. Only the remains of the vessel's steam machinery are exposed at the site. That consists of a walking beam, with attached piston and web crank rods, fragments of the steam cylinder, the remains of a cylindrical return fire-tube boiler and a paddle wheel shaft.

Identification of the *Arabian* is based on both the site location and the nature of surviving machinery. Historical sources confirm that the ship sank in the immediate vicinity offshore of Fort Fisher on Caroline Shoals north of the entrance to New Inlet. The location of the wreck corresponds favorably with that description of the area of loss and the other two vessels in and near the inlet have been identified as the *Condor*, an iron hull vessel, and the USS *Flambeau* a wood hull screw steamer. The machinery matches the walking beam, single boiler, paddle wheel configuration identified in historical source data associated with the *Arabian*.

Phantom

Date of Loss 23 September 1863

Location of Wreck **Longitude** 77° 39' 29" **Latitude** 34° 20' 14"

The wreck of the *Phantom* lies in the Atlantic Ocean one quarter mile southeast of Topsail Inlet and one half mile offshore (Figure 3). The exposed remains of the vessel consist of the boiler and a small amount of hull structure.

The surviving structure rests on a sand and shell hash bottom in 24 feet of water. The hull remains are oriented on a southeast to northwest axis and the orientation of the boiler suggests that the bow lies to the northwest.

Identification of the *Phantom* is based on both the site location and the nature of surviving machinery at the wreck site. Historical sources confirm that the ship was the only blockade runner that sank in the immediate vicinity of Topsail Inlet.[21] The location of the wreck one quarter mile southeast of Topsail Inlet corresponds favorably with the general description of the area of loss.

Exposed remains at the site are those of a steel-hull steamer. The dimensions of the hull could not be establishd because of deterioration and sediment covering the structure. The only exposed structural evidence at the site consisted of the boiler and a small section of the hull. The 22 foot beam recorded at the boiler correspond exactly with those recorded on the *Phantom*'s CBR and a set of hull plans from the Webb Institute on Long Island, New York.[22]

With the exception of the immediate vicinity of the boiler, the hull of the *Phantom* has deteriorated to the level of the bottom surface. Only a small section of a bulkhead 6 feet forward of the boiler and a 38 foot long section of the port side just above the turn of the bilge are exposed. The exposed bulkhead measures 22 feet in length and appears to represent the beam of the vessel. The horizontal fire tube boiler is 12 feet 6 inches in length and 18 feet in width.

Elizabeth

Date of Loss	26 September 1863	
Location of Wreck	**Longitude 78° 14' 01"**	**Latitude 33° 54' 47"**

The wreck of the *Elizabeth* lies in the entrance to Lockwoods Folly Inlet 1/8 mile offshore of the west end of Long Island (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 15 feet of water. The hull remains are oriented perpendicular to the shoreline with the bow inshore to

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[21]John J. Almy to S. P. Lee, 23 September 1863, *ORN*, I, 9, pp. 216-217.

[22]Certificate of British Registry, 21 May 1862, *Phantom*, BT108-81, PRO and "Plan of Steel Steamship Built in Liverpool 1862," Gustav Hillman Collection, Mariners Museum, Newport News, Virginia.

the northwest and the stern offshore to the southeast. The wood hull of the *Elizabeth* has deteriorated to leave no structural remains exposed above the level of the bottom surface. Only the remains of the vessel's steam machinery are exposed at the site (Figure 8).

Identification of the *Elizabeth* is based on both the site location and the nature of surviving machinery. Historical sources confirm that the ship sank in the immediate vicinity of Lockwoods Folly Inlet.[23] The location of the wreck corresponds favorably with that general description of the area of loss and the other two vessels in and near the inlet have been identified as the *Bendigo* and *Iron Age*.

Vessel remains exposed at the site are those of a walking beam steamer. An examination of the exposed structure confirmed the presence of a 20 foot long walking beam, piston rods, cylinder, condenser, air pump cylinder, and steam exhaust pipe. The walking beam was found partially exposed. The top of the beam protruded above the sediment at an angle of approximately twenty-five degrees and was observed to be oriented roughly east/west. The east end of the beam remained connected to dual 9 foot long rods which extended east to the top of the cylinder. Attached to the north side of the cylinder was a 5 foot long chest for the exhaust steam. At the base of the steam cylinder the remains of a condenser were visible. Between the cylinder and walking beam, the remains of an air pump were observed along with a section of lead steam pipe that remained attached to the cylinder. Although no evidence of the ship's boiler or remains of the hull structure were found, both magnetometer data and probing confirmed that additional material exists below the bottom surface.

Douro

Date of Loss	11 October 1863	
Location of Wreck	**Longitude 77° 52' 01"**	**Latitude 34° 04' 41"**

The wreck of the *Douro* lies in Carolina Beach Inlet and 800 feet offshore of the west end of Masonboro Island (Figure 3). Only a small section of the bow and a section of the machinery of the *Douro* was exposed (Figure 9). The majority of the surviving vessel structure was covered by sand and shell hash

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[23]Report from *Douro* Prisoners, 12 October 1863, *ORN*, I, 9, p. 234.

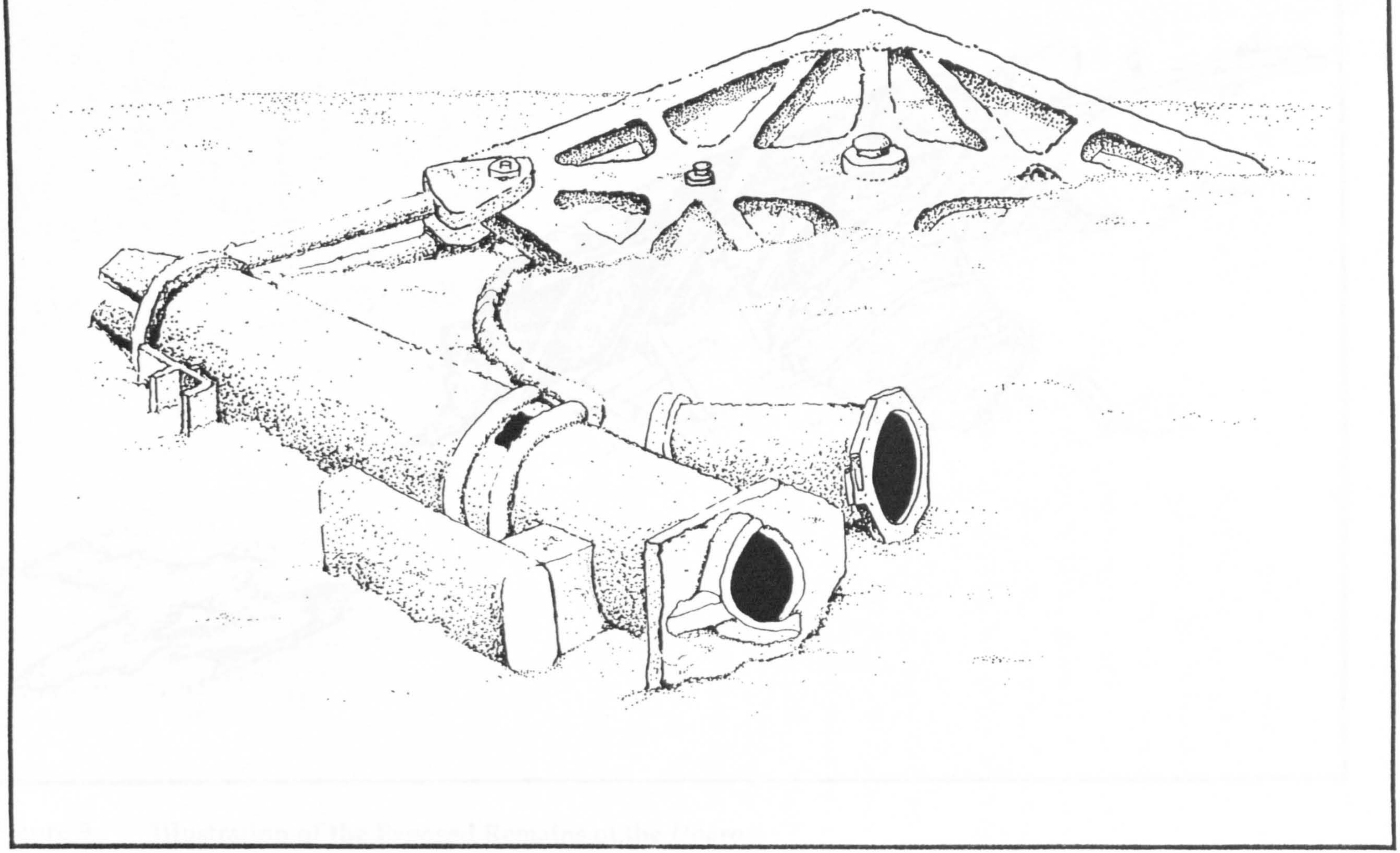

Figure 8. Illustration of the Machinery of the *Elizabeth.*

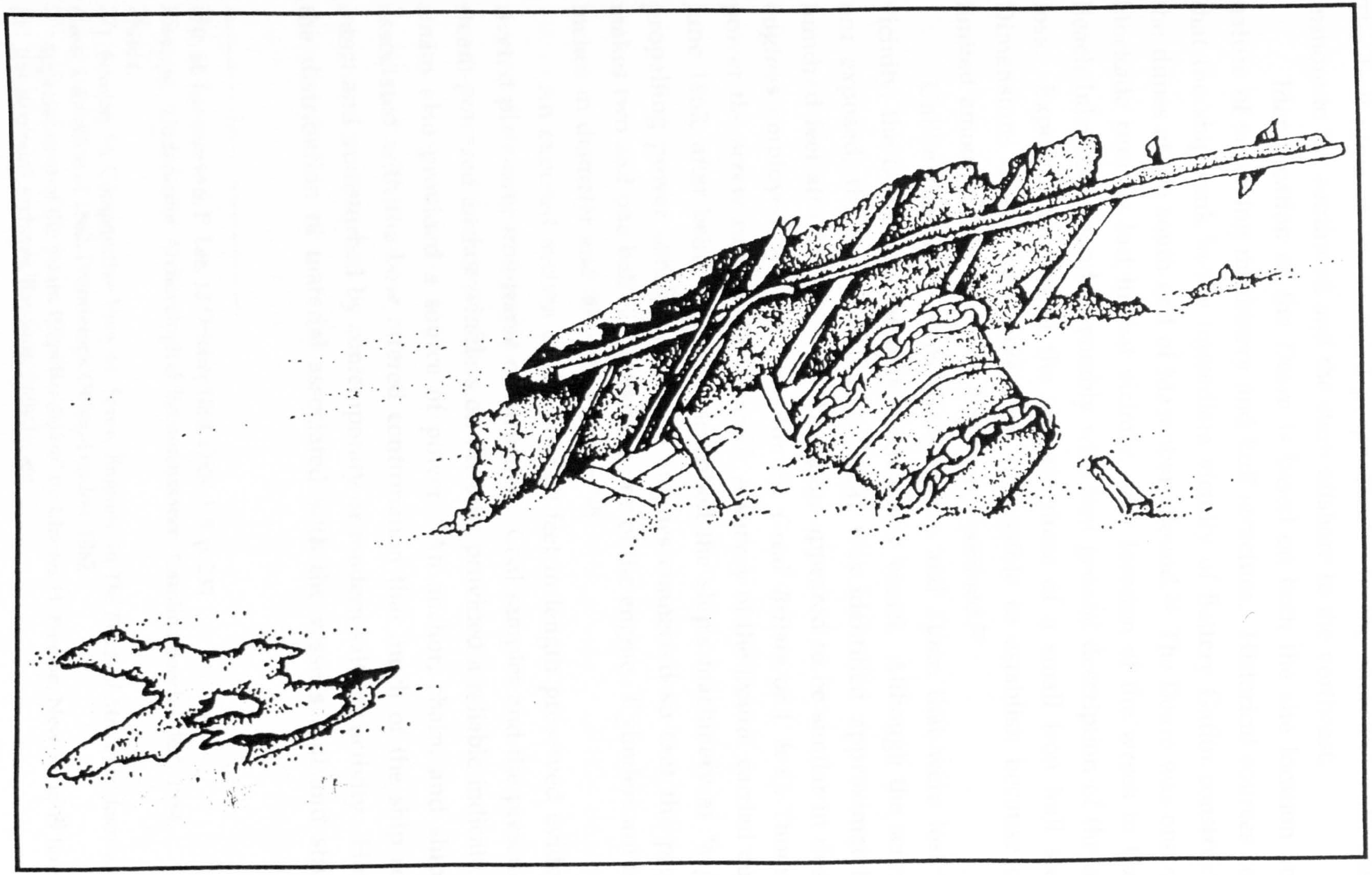

Figure 9. Illustration of the Exposed Remains of the *Douro*.

associated with Carolina Beach Inlet Shoals. The wreck lies in 9 feet of water. The hull remains are oriented perpendicular to the shoreline with the bow inshore to the southwest and the stern offshore to the northeast.

Identification of the *Douro* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Battery Gatlin constructed in the dunes at the south end of Masonboro Sound.[24] The *Douro* was one of four blockade runners lost in that vicinity. The location of the wreck in Carolina Beach Inlet corresponds favorably with that general description of the area of loss. Exposed remains at the site are those of a small iron hull steamer. Dimensions of the hull have been impossible to establish because only a limited amount of the structure has been examined.[25]

Unlike the other ships, *Hebe, Venus* and *Lynx*, that were lost in the vicinity, the *Douro* was the only single screw vessel. Although the screw was not exposed, the top of a massive gear was identified approximately one hundred feet aft of the bow.[26] That gear appeared to be similar in design to engines employed by John Penn for the *Great Britain* or J. & G. Thomson to power the screw steamer *Bordeaux*.[27] A survey of the *Douro* carried out on 9 June 1862, after being captured described the ship's machinery as "a geared propelling power consisting of two engines connected so that the propeller makes two and one half revolutions to one of the engine. Cylinders are each 30 inches in diameter and 30 inches stroke."[28]

An exposed section of the bow 20 feet in length preserved evidence of riveted plate-over-iron-frame construction. Coal samples and the presence of a steam-powered anchor windlass on the bow provided a reliable indication that steam also provided a source of power. An anchor, chain, and ship's bell associated with the bow offered confirmation that much of the ship remains intact and undisturbed by contemporary or modern salvage activity. However, the distribution of material associated with the vessel's hull and structural

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[24]R. H. Lamson to S. P. Lee, 12 October 1863, *ORN*, I, 9, p. 233.

[25]Watts, "Underwater Archaeological Reconnaissance, Carolina Beach Inlet", 1984.

[26]*Ibid*.

[27]J. Bourne, "A Comparative View of Screw Engines" in *The Practical Mechanics Journal*. The Great Exhibition of 1862, Proprietor's Office, London, 1862.

[28]"Appraisement of the Steam Propeller *Douro*" by Charles H. Pierson, New York, 19 June 1863, RG 100, Regional Archives, Bayonne, New Jersey.

remains (hull plate fragments) found outside the confines of the hull confirmed damage caused by activities surrounding the loss of the ship and/or the dynamic shoal environment.

The longitudinal axis of the exposed bow section lies roughly east to west. The bow lies to the west and extends well into the eastern side of the deep water channel leading to the bar. The hull lists to starboard approximately forty-five degrees, and this orientation places the port deck clamp, one of the major longitudinal supports of the hull structure, at the top of the exposed hull remains.

Venus

Date of Loss 21 October 1863

Location of Wreck **Longitude 77° 52' 28"** **Latitude 34° 04' 11"**

The wreck of the *Venus* lies in the Atlantic Ocean one mile southwest of Carolina Beach Inlet and one quarter mile offshore (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 12 feet of water. The hull remains are oriented perpendicular to the shoreline with the bow inshore to the west northwest and the stern offshore to the east southeast. Only one section of hull of the *Venus* remains exposed. That section consists of the paddle wheel shaft, hull structure associated with the engineering space amidships, a small portion of one of the boilers and a section of the stern (Figure 10).

Identification of the *Venus* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Battery Gatlin, constructed in the dunes at the south end of Masonboro Sound.[29] The *Venus* was one of four blockade runners lost in that vicinity.[30] The location of the wreck southwest of Carolina Beach Inlet corresponds favorably with the general description of the area of loss. Exposed remains at the site are those of a small paddle wheel steamer.

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29 R. H. Lamson to S. P. Lee, 21 October 1863, *ORN*, I, 9, pp. 249-250.

30 Watts, "Underwater Archaeological Reconnaissance, Carolina Beach Inlet", 1984.

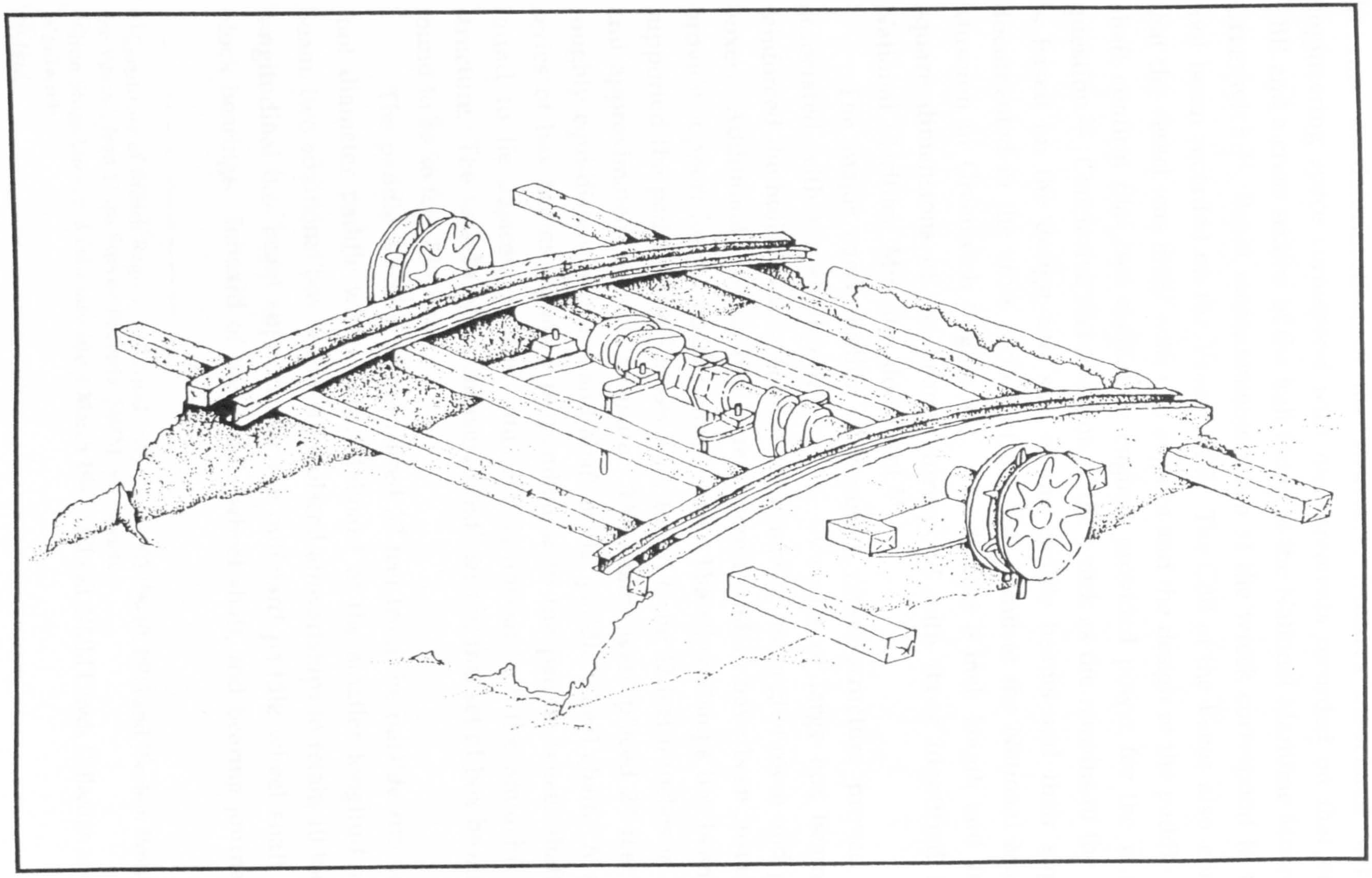

Figure 10. Illustration of the Engineering Space of the *Venus*.

Although the dimensions of the hull have been impossible to establish because of deterioration of the structure, features associated with the engineering space correspond with measurements recorded on that vessel's CBR and a cross section of the hull found at the National Maritime Museum in Greenwich.[31] Beam measurements taken at the wreck correspond to the 26 foot beam recorded on the *Venus'* CBR. The CBR of the *Venus* also confirms that the vessel was fitted with two engines and the design of the paddle wheel shaft confirm that two oscillating engines provided power for the wreck in question.[32] Conclusive identification of the wreck as the remains of the *Venus* is based on the design and size of the paddle beams and their supports documented in the cross section of the hull found at the National Maritime Museum in Greenwich (Figure 11). The 42 foot 6 inch length and 16 inch square dimensions of the beams correspond with those identified in the National Maritime Museum document.[33]

The major concentration of exposed vessel structure proved to be associated with the engineering space. A series of large box beams that reinforced the hull structure defined the extent of the engine room and paddle boxes. Additional internal box beams were found to have been installed to provide support for the paddle wheel shaft. The athwartships box beams that supported the paddle wheel boxes were found to be 42 feet 6 inches in length and approximately 16 inches square. The beams were placed 24 feet apart, roughly equi-distant forward and abaft of the paddle wheel shaft. A second series of box beams installed perpendicular to the paddle wheel shaft were found to lie adjacent to and immediately inboard of the amidships hull structure. The vessel's beam, measured outboard of this set of box beams, was found to be 26 feet 2 inches.

The paddle wheel shaft measured 37 feet from the outside rim of the 5 foot diameter paddle wheel hubs. Inboard of the smaller longitudinal box beam, two additional box beams were placed athwartships to retain 10 foot long longitudinal box beam supports for the outboard paddle wheel shaft pillow block bearings. Inboard of the paddle wheel shaft, rod bearing journals and

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[31]Certificate of British Registry, 17 April 1863, *Venus*, BT108-10, PRO and "Section Profile of the *Venus*", Iron Ships Survey Records, NMM, Woolwich.

[32]Iron Ships Survey, 6 February and 4 March 1863, Millwall, NMM Lloyds Collection at Woolwich.

[33] *Ibid.*

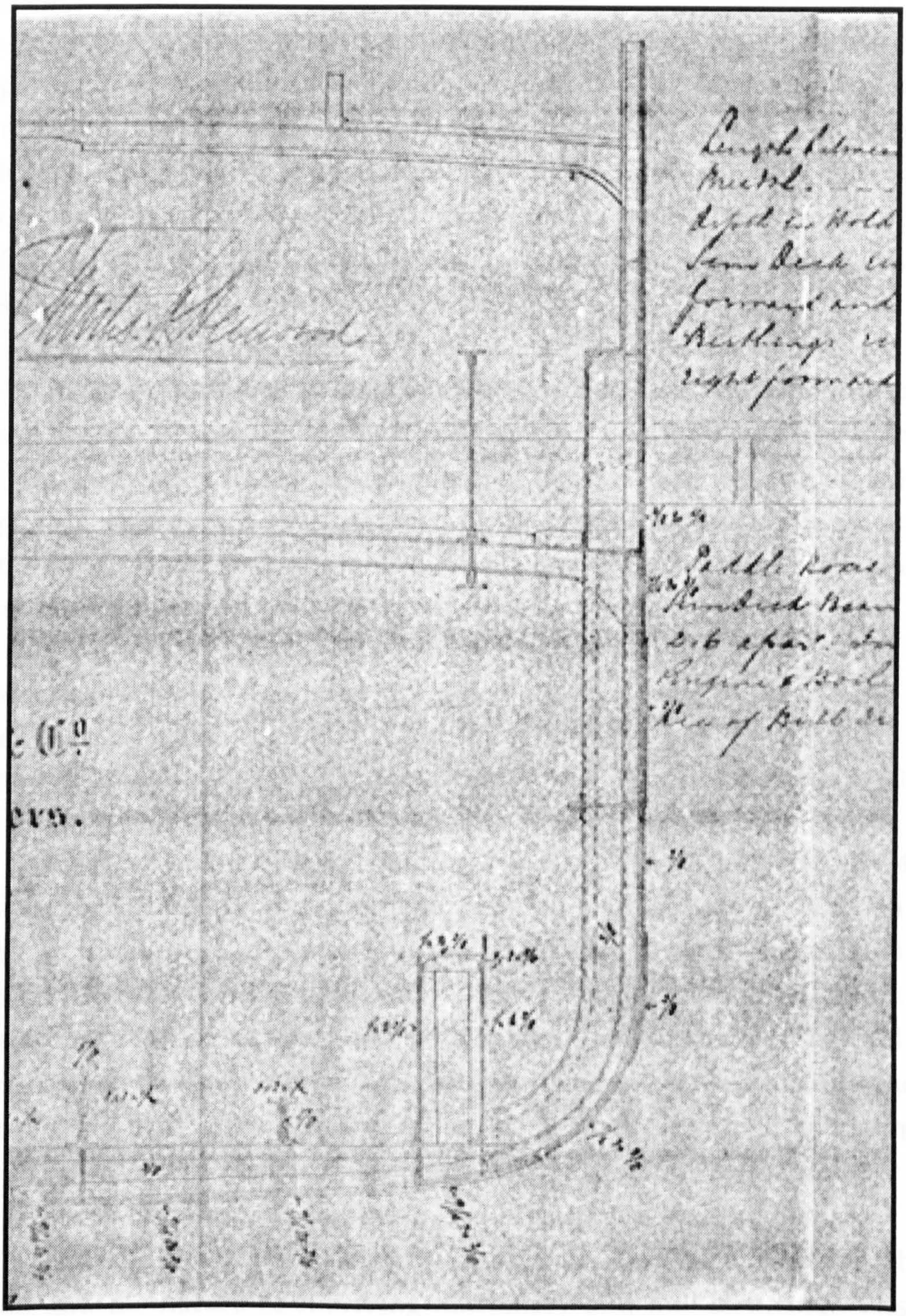

Figure 11. Section of the Hull of the *Venus*.

iron stanchions provided support for additional pillow block bearings. Both the pillow block bearing caps and the piston rod bearing caps had been removed.

Forward of the engine room, the remains of the vessel's forward boiler was partially exposed above the bottom sediment. The exposed portion of the boiler was roughly 20 feet in athwartships length and 3 feet in both height and width. No evidence of the exhaust stack vent was visible on the exposed portion of the forward boiler and no evidence of a second boiler could be found aft of the engine room. However, due to heavy sanding around the wreck's exposed machinery, this was not considered unusual.

One hundred feet southeast of the ship's machinery and along the vessel's longitudinal axis, a small portion of the stern was identified. The exposed portion of the stern proved to be the port quarter at and above the deck level. Inboard of the waist, an iron mooring bitt was attached to the main deck clamp just forward of the mooring throat. The exposed stern section was found to list approximately 35 degrees to starboard and extended only 4 feet above the bottom sediment.

General Beaureguard

Date of Loss	11 December 1863	
Location of Wreck	**Longitude 77° 53' 32"**	**Latitude 34° 01' 35"**

The wreck of the *General Beaureguard* lies in the Atlantic Ocean 4 miles northeast of Fort Fisher and approximately 700 feet offshore of Carolina Beach (Figure 3). The exposed remains of the vessel consist of an extensive amount of hull structure, two boilers and a relatively intact engine room. The surviving structure rests on a sand bottom in 14 feet of water. The hull of the *General Beaureguard* consists of five distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold and stern. The hull remains are oriented perpendicular to the shoreline with the bow to the northwest and the stern offshore to the southeast.

Identification of the *General Beaureguard* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship was run aground immediately off shore of Flag

Pond Battery, located in the vicinity of Flag Pond in Carolina Beach.[34] The *General Beaureguard* was the only Civil War vessel lost in that vicinity. Thus the location of the wreck corresponds favorably with the historical description of the site of loss. Exposed remains at the site are those of a large iron hull steamer. Conclusive identification of the wreck as the remains of the *General Beaureguard* is based on the vessel's location, dimensions and steam machinery. Although the dimensions of the hull were impossible to precisely establish because of deterioration of the structure, the 215 foot overall length of the wreck and 6 foot section of the displaced fantail corresponds closely with the 223 foot length of the *General Beaureguard* recorded on the *Havelock's*, the vessel's previous name, CBR.[35] The 26 foot beam and 53 foot 10 inch length of the engine room recorded at the wreck site also correspond very closely with those recorded on the CBR. The *General Beaureguard*'s CBR and historical data associated with the vessel confirms that the ship was powered by two side lever engines and a like number were identified at the wreck site.

The bow section of the *General Beaureguard* measured 30 feet long and protruded from the bottom sediment. Most of the stem and much of the forward section is covered by sediment and lists to port at an angle of approximately forty-five degrees. The exposed section of the bow extends from the vicinity of the bulkhead forward of the forward cargo hold to the stem. The exposed portion extends more than 8 feet into the water column at the point of separation from the forward cargo hold. Though heavy fouling prevented highly accurate measurement, frames appeared to be on 18 inch centers. Deck beams appeared to be a T-bulb design on 36 inch centers. A 24 inch main deck stringer plate remained intact inside the exposed section of the bow.

Aft of the bow the hull comprising the forward cargo hold has collapsed to a level approximately 3 feet above the turn of the bilge. That section of the wreck is almost entirely covered by sand, shell hash and the fragmented remains of the upper hull and deck. On the starboard side of the cargo hold 28 feet forward of the aft cargo hold bulkhead are the remains of a steam powered deck windlass. The windlass was equipped with two warping heads and measured 5 feet in width and 4 feet in length.

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[34]S. P. Lee to G. Welles, 16 December 1863, *ORN*, I, 9, pp. 354-355.
[35]Certificate of British Registry, 1 July 1858, *Havelock*, BT108-206, PRO.

The forward extremity of the engine room was defined by the bulkhead at the aft end of the forward cargo hold. The remains of that bulkhead were 5 feet forward of the steam machinery. The aft end of the engineering space is identified by another bulkhead. That bulkhead is 54 feet aft of the one that defines the forward extent of the engineering space. The *General Beaureguard*'s steam machinery consists of two side level engines mounted forward of and connected to a paddle wheel shaft. Each engine consists of a vertically mounted 48-inch diameter steam cylinder, 6 feet in length. The piston rod is connected to a crosshead above the cylinder. Each end of the crosshead is connected to the forward end of port and starboard side levers by a 4 inch-diameter rod. Each side lever is mounted to the engine frame aft of the steam cylinder using a trunnion and bearing arrangement that permits the side levers to transfer the motion of the piston to air pumps mounted on the engine frame aft of the cylinders to the paddle wheel shaft by means of a rod connecting the aft end of the side levers to the cranks of the paddle wheel shaft. The center line of each engine is 4 feet 6 inches outboard of the centerline of the hull and both are surrounded by rails that form a walkway between the two engines. The paddle wheel shaft is mounted above and aft of the steam machinery. The 12 inch diameter shaft is 44 feet in length and is mounted on plummer-block bearings attached to an 18 foot long by 8 foot-wide plate supported by eight stanchions. The outboard ends of the paddle wheel shaft have a 5 foot diameter 5 foot wide hub mounted 24 inches inside the end of the shaft. The ends of the paddle wheel shaft are designed to ride in bearings on the sponson beams.

Immediately aft of the paddlewheel shaft is a coal bunker formed by two bulkheads 8 feet apart and spanning the entire 26 foot width of the hull. Five feet aft of that coal bunker bulkhead are the remains of the forward boiler of the *General Beaureguard*'s two boilers. The boilers were mounted back to back in the hull. Each boiler is 12 feet in length and 20 feet in width. Both boilers were constructed with three furnaces and the forward face of the forward boiler and the aft face of the aft boiler is fitted with three fire box doors and three ash pits. The top of the forward boiler contains the remains of three steam drums that were located inside a common uptake. Five feet aft of the second boiler the remains of a bulkhead identify the extremity of the engine room and suggest the presence of a second coal bunker forward of the aft cargo hold.

Between that bulkhead and the remains of the stern, the hull has collapsed and the after cargo hold is almost entirely covered by sand. On the starboard side of the wreck the lower hull is exposed. That section was 51 feet in length and consisted of hull plating, frames on 18 inch centers and a double angle iron side stringer. Aft of a break in the exposed hull structure on the starboard side, the remains of the port quarter and fantail are exposed. The forward extremity of that section of the hull contains the remains of the bulkhead that separated the after cargo hold from the stern. The 28 foot long section of the stern lists heavily to starboard. That list exposes the port side of the hull below the transom. The interior of the stern section preserves the main deck stringers and deck beams and contains the remains of a large water tank. The head of the rudder post was intact along with the tiller bars and the rudder remains attached to the sternpost.

Bendigo

Date of Loss	2 January 1864	
Location of Wreck	**Longitude** 78° 14' 22"	**Latitude** 33° 54' 35"

The wreck of the *Bendigo* lies in the Atlantic Ocean on the west side of Lockwoods Folly Inlet and one eighth mile offshore (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 4 to 9 feet of water. The hull remains are oriented parallel to the shoreline with the bow to the east southeast and the stern to the west southwest. With the exception of sections of the hull and engineering space amidships, most of the steamer's remains are covered by sediment (Figure 12).

Identification of the *Bendigo* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Lockwoods Folly Inlet.[36] The *Bendigo* was one of three Civil War vessels lost in that vicinity. The location of the wreck corresponds favorably with the general description of the area of loss. Exposed remains at the site are those of a small iron hull steamer. Although the dimensions of the hull have been impossible to establish because of deterioration of the structure, the overall length of the wreck is sufficient to accommodate the 162 foot length of the *Bendigo* recorded on that vessel's CBR. The 20 foot beam and 38 foot 6 inch length of the engine room recorded at the

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[36]F. S. Wells to S. P. Lee, 13 January 1862, *ORN*, I, 9, pp. 400-401.

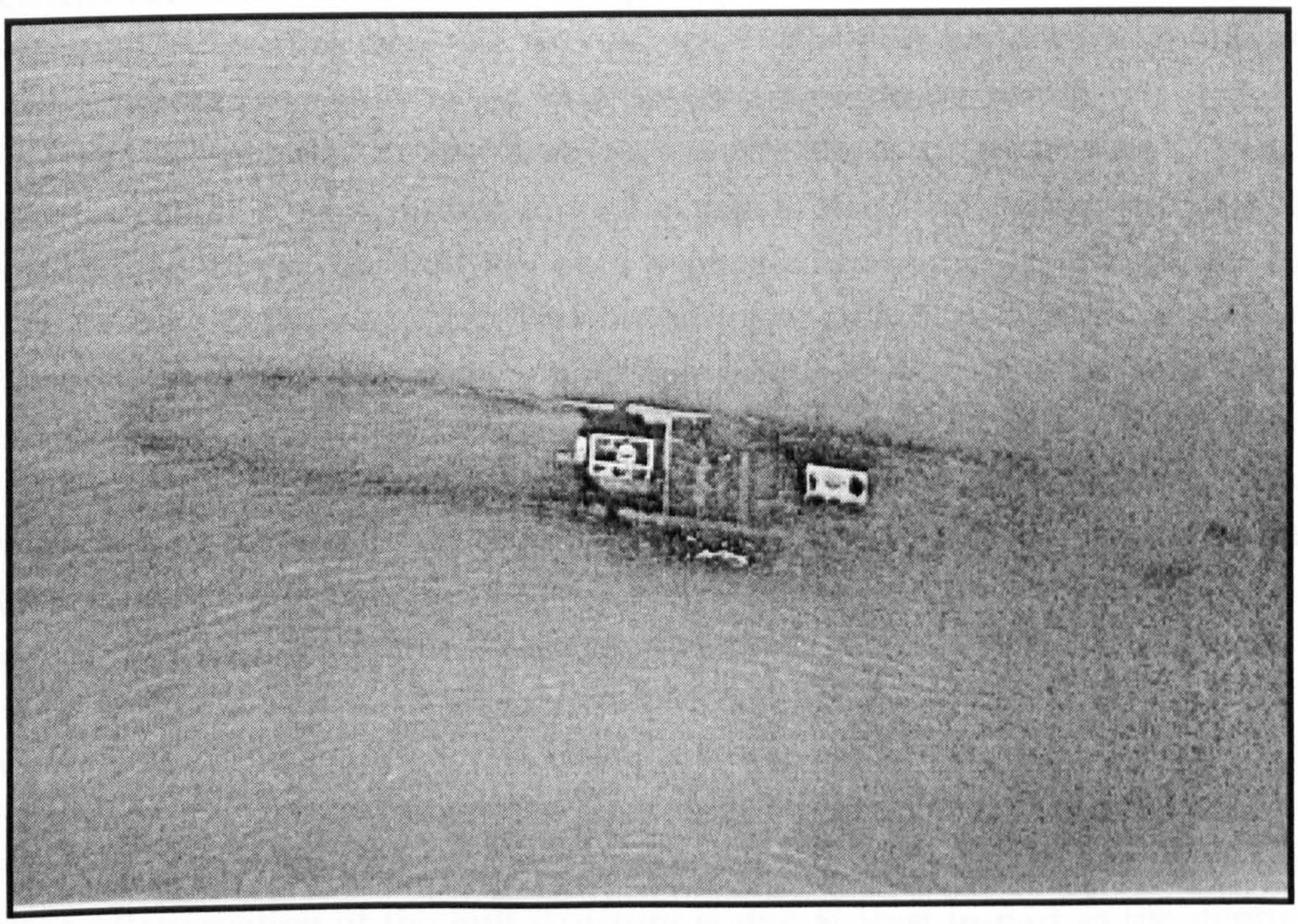

Figure 12. **Photograph of the Wreck of the *Bendigo* (Hall Waters).**

wreck site also correspond closely with those recorded on the CBR. The *Bendigo*'s CBR confirms that the vessel contained two engines, or steam cylinders and historical data associated with the vessel confirms that configuration of the engines.[37]

Conclusive identification of the wreck as the remains of the *Bendigo* is based on the vessel's location and steam machinery. Unlike the other ships, *Iron Age* and *Elizabeth,* that were lost in Lockwoods Folly Inlet, the *Bendigo* was the only iron hull paddle steamer. Both the *Iron Age* and *Elizabeth,* had wood hulls and neither was equipped with a two cylinder engine configuration.[38] In addition, the port paddle wheel of the *Bendigo* was destroyed by gunfire from the USS *Fahkee*.[39] The port paddle wheel hub and port section of the paddle wheel shaft are missing from the wreck.

Vessel remains at the *Bendigo* site are those of an iron-hull, paddle wheel steamer. An examination of exposed structure confirmed that the longitudinal axis of the hull lies on a magnetic bearing of approximately 130° with the bow to the southeast. Forward of the engineering space the remains of the vessel are covered by sediment accumulations of more than 10 feet. During periods when the channel migrated into the immediate vicinity of the wreck, the remains of the bow scour settled into the channel shoulder creating a break in the hull in the vicinity of the forward coal bunker. With the exception of a 10 by 10 inch structure that may have served as the support for a forward mast, no evidence of hull structure could be identified.

The engineering space amidships contains the remains of the vessel's boilers and steam machinery. The hull, reinforced to carry the weight of the machinery, and the machinery itself survives in a good state of preservation to the level of the main deck. Deck beams survive throughout the engineering space. Preservation of the hull structure is due at least in part to the depth of sediment surrounding the hull. The port paddle wheel and a portion of the paddle wheel shaft outboard of the port steam cylinder have separated from the wreck, and are no longer visible at the site. The starboard paddle wheel hub, lower spokes, bucket mounts, and the remainder of the shaft survive intact supported by stanchions and the rods that connect the shaft to the air pumps

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37Certificate of British Registry, 16 July 1863, *Bendigo*, BT108-81, PRO.

38Gordon Watts, "Underwater Archaeological Reconnaissance and Historical Investigation of Shipwreck Sites in Lockwoods Folly Inlet," 1986.

39E. E. Stone to G. Welles, 14 January 1864, *ORN*, I, 9, pp. 396-398.

and oscillating steam cylinders located below. Pillow-block bearing caps on the shaft have been removed. Measurement of the hull immediately forward of the aft boiler produced a beam of 20 feet 2 inches. Paddle boxes 8 feet in width increased the maximum beam of the vessel to 36 feet 2 inches. Remains of the starboard paddle wheel confirmed that the diameter of the wheel was 14 feet and buckets were 5 feet in length. No evidence of a feathering mechanism was observed but only a limited amount of the extremities of the exposed wheel assembly was exposed.

Forward and aft of the steam machinery, the remains of the vessel's two boilers are exposed. Plating on the 8 foot 5 inch by 4 foot 10 inch steam chambers has deteriorated but frames survive to preserve evidence of design and construction. The boilers were covered by sediment to the base of the steam chamber but a length of 8 feet 8 inches and a width of 8 feet was determined by washing sediment out around the aft boiler. The top of each steam chamber was constructed to provide a 2 foot 4 1/2 inch diameter exhaust for the smoke pipes. Coal bunkers were constructed between the boilers and the hull on both the port and starboard sides of the ship.

Aft of the engineering space, shoal sediment covers most of the hull structure. Although probing confirmed that much of the hull survives intact to the level of the deck, examination of the structure was not possible. Only the rudder quadrant located 63 feet aft of the after boiler was exposed above the bottom surface. Probing in the vicinity of the exposed quadrant confirmed that the hull structure terminated at a point immediately aft of the quadrant.

Specifications for the vessel developed from survey data include a length between perpendiculars of approximately 176 feet, a displacement hull beam of 20 feet 2 inches, a maximum beam of 36 feet 2 inches, and a depth of hold of 10-feet. Draft calculated from these dimensions might be expected to be in the vicinity of 7 feet.

Ranger

Date of Loss	11 January 1864	
Location of Wreck	**Longitude 78° 15' 32"**	**Latitude 33° 54' 39"**

The wreck of the *Ranger* lies in the Atlantic Ocean two miles west of Lockwoods Folly Inlet and 600 feet offshore of Holdens Beach (Figure 3). The exposed remains of the vessel consist of an extensive amount of hull structure,

two boilers and machinery associated with the engine room. The surviving structure rests on a sand bottom in fourteen feet of water. The hull of the *Ranger* consists of five distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold and stern. The hull remains are oriented parallel to the shoreline with the bow to the east and the stern to the west.

Conclusive identification of the wreck as the remains of the *Ranger* is based on the vessel's location, dimensions and steam machinery. Historical sources confirm that the ship was run ashore two miles west of Lockwoods Folly Inlet.[40] The *Ranger* was the only blockade runner lost in that vicinity. The location of the wreck two miles west of Lockwoods Folly Inlet corresponds favorably with the general description of the area of loss. Exposed remains at the site are those of a large iron paddle wheel steamer.

Although the dimensions of the hull were impossible to precisely establish because of deterioration of the structure, the 225 foot overall length of the wreck and 6 foot section of the displaced fantail corresponds closely with the 232 foot length recorded on that vessel's CBR.[41] A 25 foot beam and 47 foot 5 inch engine room measurement taken at the wreck correspond closely with the 25 foot 4 inch beam and 47 foot 5 inch engine room dimensions recorded on the *Ranger'* s CBR. The CBR of the *Ranger* also confirms that the vessel was fitted with two engines and two oscillating engines provided power for the wreck in question.

The bow section of the *Ranger* measured 34 feet long and protruded from the bottom sediment. Most of the stem and much of the forward section is exposed and lists to starboard at an angle of approximately 75 degrees. The exposed section of the bow extends from the vicinity of the bulkhead forward of the forward cargo hold to the stem. The exposed portion extends more than 6 feet into the water column at the point of separation from the forward cargo hold. Though heavy fouling prevented highly accurate measurement, frames appeared on 18 inch centers. Deck beams appeared to be on 36 inch centers. A 24 inch main deck stringer plate remained intact inside the exposed section of the bow. The port anchor davit remains in its socket immediately aft of the hawse hole.

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[40]S. P. Lee to Gideon Welles , 11 January 1863, *ORN*, I, 9, p. 402 and George W. Gift to Catesby ap R. Jones, 27 January 1863, *ORN*, I, 9, p. 405.

[41]Certificate of British Registry, 6 November 1863, *Ranger*, BT108-81, PRO.

Aft of the bow the hull comprising the forward cargo hold has collapsed to the turn of the bilge. That section of the wreck is almost entirely covered by sand but the area immediately aft of the bow contains the exposed remains of some of the upper hull and deck. One section of the upper hull contains several intact port lights. Between that concentration of wreckage and the engineering space amidships sediment covers all evidence of articulated lower hull structure and only a few sections of hull plate were exposed.

The forward extremity of the engine room was defined by the bulkhead at the aft end of the forward cargo hold. The remains of that bulkhead were 8 feet forward of the forward boiler. The aft end of the engineering space is defined by another bulkhead. That bulkhead is 47 feet 6 inches aft of the one that defines the forward extent of the engineering space. The *Ranger*'s steam machinery consists of two oscillating cylinder engines mounted directly below the paddle wheel shaft. Each engine consists of a vertically mounted 54 inch diameter steam cylinder, 6 feet in length. Piston stroke, based on the paddle wheel shaft web cranks, was 4 feet.

The largest section of the paddle wheel shaft contains the web cranks associated with both oscillating steam cylinders and the eccentric and air pump crank web between the steam cylinders. That section of the shaft is supported by the piston rods which protrude from the steam cylinders and eight stanchions supported plummer block bearings. The caps of each of the plummer blocks had been removed. The air pump was mounted over the top of the condenser between the steam cylinders.

Outboard of the starboard steam cylinder the starboard section of the paddle wheel shaft with the hub and other half of the starboard steam cylinder crank web lies on the bottom. That section of shaft measures 12 feet 8 inches in length and contains a 4 foot diameter 36 inch wide paddle wheel hub. Just inside the hull and outside the starboard steam cylinder are the remains of a small steam bilge pump. The outboard section of the port paddle wheel shaft with the hub and other half of the port steam cylinder crank web lie on the bottom outside the port side of the surviving hull structure. That section of shaft measures 12 feet 8 inches in length and contains the other paddle wheel hub.

Five feet aft of the forward engine room bulkhead are the remains of the forward of the *Ranger* 's two boilers. The second boiler was mounted 8 feet forward of the aft engine room bulkhead. Each boiler is 10 feet 6 inches in

length and 16 feet in width. Both boilers are constructed with three furnaces and the forward face of the forward boiler and the aft face of the aft boiler is fitted with three fire box doors and three ash pits. The tops of both boilers have been destroyed exposing the horizontal fire tubes and a common uptake. The remains of a bulkhead between the boilers and the side of the hull of the ship suggest the presence of coal bunkers that run the entire length of the engineering space.

Between the aft engineering space bulkhead and the remains of the stern, the hull has collapsed and the after cargo hold is almost entirely covered by sand. On the starboard side of the wreck the lower hull is exposed. That section was 51 feet in length and consisted of hull plating, frames on 18 inch centers and a double angle iron bilge stringer. On the port side the hull is also broken down to a line just above the turn of the bilge. Below the turn of the bilge the remains of wood bilge ceiling survive intact. Much of the remains of the upper hull structure lie along the inshore side of the wreck.

Aft of a break in the exposed hull structure on the port side, the remains of the stern and fantail are exposed. The forward extremity of that section of the hull contains the remains of the bulkhead that separated the after cargo hold from the stern. The 37 foot long section of the stern lists slightly to starboard. The interior of the stern section preserves the main deck stringers and deck beams and the remains of a large water tank. The head of the rudder post was intact along with the tiller bar and the rudder remains attached to the sternpost.

Wild Dayrell

Date of Loss	1 February 1864	
Location of Wreck	**Longitude** 77° 42' 39"	**Latitude** 34° 17' 48"

The wreck of the *Wild Dayrell* lies in the entrance to Rich's Inlet off the west end of Figure Eight Island (Figure 3). Surviving vessel structure rests on a sand and shell hash bottom in 15 feet of water. The hull remains are oriented perpendicular to the shoreline with the bow inshore to the northwest and the stern offshore to the southeast. The hull of the *Wild Dayrell* has broken into five distinct elements. Those include the bow, forward hold, engineering space amidships, aft hold and stern (Figure 13).

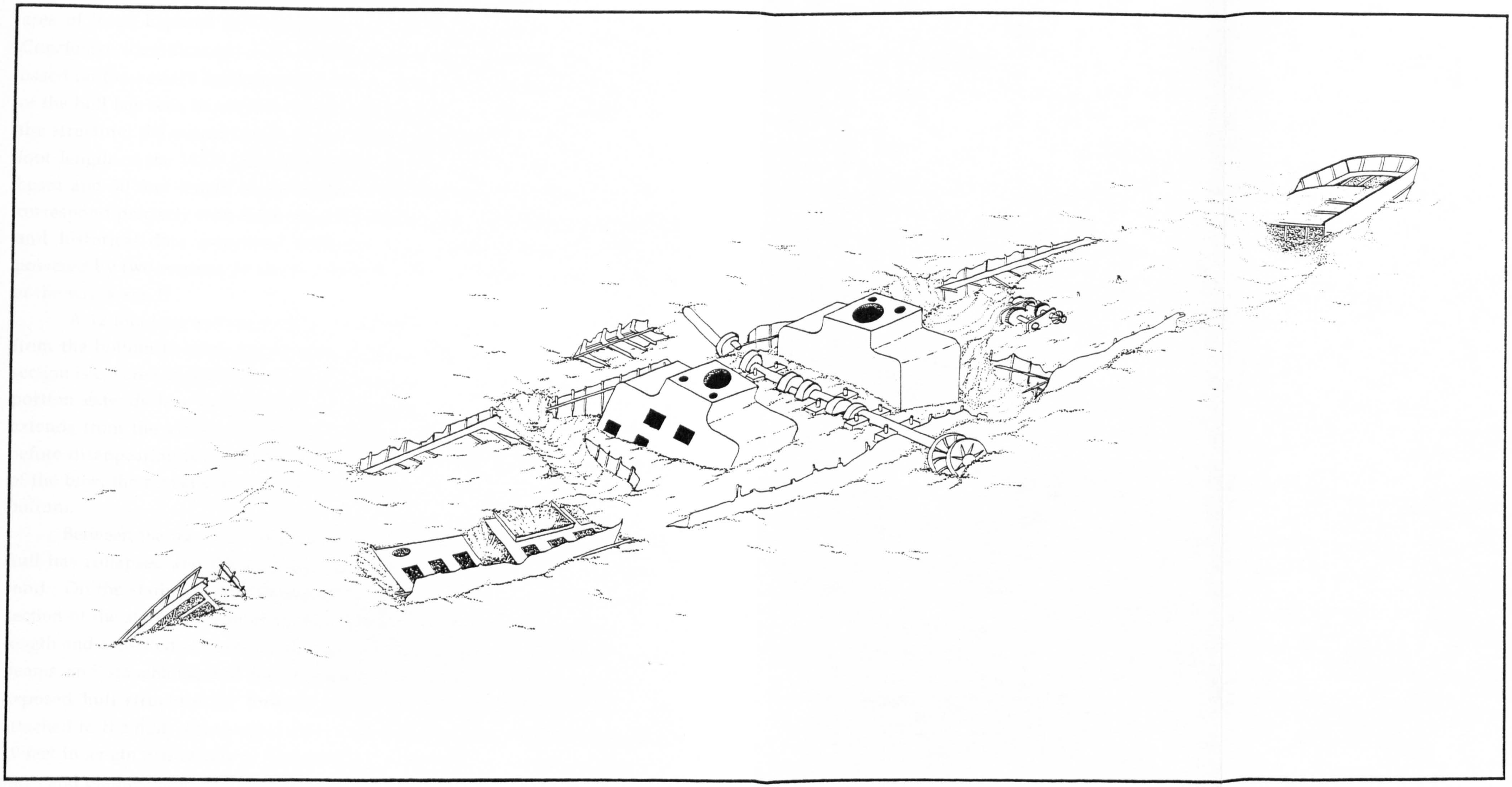

Figure 13. Illustration of the Wreck of the *Wild Dayrell*.

Identification of the *Wild Dayrell* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Richs Inlet.[42] The location of the wreck corresponds favorably with that general description of the area of loss. Exposed remains at the site are those of an iron hull steamer. Conclusive identification of the wreck as the remains of the *Wild Dayrell* is based on the vessel's location and steam machinery. Although the dimensions of the hull has been impossible to precisely establish because of deterioration of the structure, the overall length of the wreck corresponds closely with the 215 foot length of the *Wild Dayrell* recorded on that vessel's CBR. The 20 foot beam and 50 foot length of the engine room recorded at the wreck site also correspond precisely with those recorded on the CBR. The *Wild Dayrell* 's CBR and historical data associated with the vessel confirm that the ship was powered by two engines, or steam cylinders and a like number were identified at the wreck site.[43]

A 12 foot long section of the starboard bow of the *Wild Dayrell* protrudes from the bottom to mark the forward section of wreckage. Most of the bow section is covered by sediment and lists dramatically to port. The small exposed portion extends less than 4 feet into the water column. The exposed hull extends from the vicinity of the forward cargo hold forward less than 8 feet before disappearing into the bottom. Five feet aft of the small exposed section of the bow, the remains of the forward cargo hold bulkhead protrude from the bottom.

Between the forward bulkhead and the engineering space amidships, the hull has collapsed and the forward cargo hold is almost entirely covered by sand. On the starboard side 18 feet aft of the forward cargo hold bulkhead, a section of the starboard side of the hull is exposed. That section was 29 feet in length and consisted of the bulwark stays and plating, main deck stringers, deck beams and stanchions, and forward hatch combings. Aft of a break in the exposed hull structure the forward end of the paddle box spur beam was attached to the hull. On the port side of the forward hold a section of the hull 19 feet in length was exposed. That section consisted of the remains of bulwark stays and plating, main deck stringers and deck beams and stanchions.

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[42]F.A. Roe to S. P. Lee, 3 February 1864, *ORN*, I, 9, pp. 438-439.

[43]Certificate of British Registry, 12 November 1863, *Wild Dayrell*, BT108-81, PRO.

The forward extremity of the engine room was defined by the bulkhead aft of the forward cargo hold. The remains of that bulkhead were 5 feet forward of the forward boiler. Both boilers listed heavily to port and were more than half covered by sediment. The boilers of the *Wild Dayrell* both measured 10 feet in length and 16 feet 10 inches in width. The top of each boiler was constructed with a 9 foot long by 8 foot wide steam collector that was a maximum of 4 feet 5 inches in height. The top of each steam collector contained a 3 foot 7 inch diameter uptake vent for the smoke pipe. The forward face of the forward boiler contained the fire tube inspection plates and fire box and ash pit doors. Those same features were on the aft face of the after boiler.

The 18 foot 6 inch space between the boilers contained the remains of the vessel's steam machinery. Although the engine room was covered in sediment to the level of the deck, most of the paddle wheel shaft and one of the paddle wheel hubs were exposed. The port paddle wheel hub proved to be 4 feet in diameter and 30 inches in width. None of the spokes remained attached to the hub. The 8 inch diameter shaft extended 40 inches beyond the hull on the port side. The bell crank for the port steam cylinder was located 7 feet 8 inches inboard of the paddle wheel hub. The bell crank arm widths measured 11 inches and the center to center measurement from the paddle wheel shaft to the piston rod journal was 2 feet. The bell crank for the eccentrics and air pump was located 2 feet 1 inch inboard of the port cylinder bell crank. Starboard sections of the paddle wheel shaft had been dislodged and the paddle wheel hub was not exposed. Exposed sections of the starboard paddle wheel shaft mirrored the port shaft measurements. The shaft was supported by four plummer block bearings. The caps of each bearing had been removed.

Five feet aft of the after boiler a third bulkhead identified the forward end of the after cargo hold. Between that bulkhead and the remains of the stern, the hull has collapsed and the after cargo hold is almost entirely covered by sand. On the port side 10 feet aft of the forward cargo hold bulkhead, a section of the hull is exposed. That section was 21 feet in length and consisted of the bulwark stays and plating, main deck stringers and deck beams. Two similar sections of the hull, 14 and 8 feet in length, identify the starboard side of the after cargo hold. The remains of a small steam windlass were attached to a small section of the deck that is exposed between sections of the hull structure.

Aft of the break in the exposed hull structure on the port side, the remains of the port quarter and fantail are exposed. The forward extremity of that section of the hull contains the remains of the bulkhead that separated the after cargo hold from the stern. The 38 foot long section of the stern lists heavily to starboard. That list exposes the port side of the elliptical fantail, the bulwark stays and plating, main deck stringers and deck beams. The head of the rudder post was also exposed.

Lynx

Date of Loss 25 September 1864

Location of Wreck **Longitude 77° 52' 45"** **Latitude 34° 03' 36"**

The wreck of the *Lynx* lies in the Atlantic Ocean one mile south southeast of Carolina Beach Inlet and one quarter mile offshore (Figure 3). The exposed remains of the vessel consist of a small amount of exposed hull structure, the remains of the vessel's boilers and a concentration of steam machinery. The surviving structural remains lie on a sand bottom in 18 feet of water. The hull of the *Lynx* consists of three distinct elements. Those include the bow, forward cargo hold and engineering space amidships. No evidence of the hull aft of the engineering space was exposed at the wreck site. The hull remains are oriented perpendicular to the shoreline with the bow to the west northwest and the machinery offshore to the east southeast.

Identification of the *Lynx* is based on both the site location and the nature of surviving machinery and hull structure. Historical sources confirm that the ship sank in the immediate vicinity of Battery Gatlin, constructed in the dunes at the south end of Masonboro Sound.[44] The *Lynx* was one of four blockade runners lost in that vicinity. The location of the wreck south southeast of Carolina Beach Inlet corresponds favorably with the historical description of the area of loss. Exposed remains at the site are those of a large paddle wheel steamer.[45]

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44 J. W. Balch to S. P. Lee, 26 September 1864, *ORN*, I, 10, pp. 479-480 and John MacDiarmid to O. S. Glisson, 26 September 1864, *ORN*, I, 10, pp. 480-481.

45 Gordon Watts, "Underwater Archaeological Reconnaissance, Carolina Beach Inlet," 1984.

Although the dimensions of the hull have been impossible to establish because of deterioration of the structure, details associated with the engineering space correspond with measurements recorded on that vessel's CBR.[46] Beam measurements taken at the wreck correspond to the 24 foot beam recorded on the *Lynx*'s CBR. The CBR of the *Lynx* also confirms that the vessel was fitted with two engines. Two oscillating engines provided power for the wreck in question. Conclusive identification of the wreck as the remains of the *Lynx* is based on the beam measurement, the number and design of the engines and the fact that each of the three other wrecks in the vicinity of Carolina Beach Inlet have been identified by highly conclusive design and construction details.

Two sections of hull structure identify the location of the bow of the *Lynx*. The largest represents the port bow and measured 29 feet long. Most of the stem and much of the forward section was covered by sediment and lists to starboard at an angle of approximately forty-five degrees. The exposed section of the bow extends from the vicinity of the bulkhead forward of the forward cargo hold to the stem at the main deck. The exposed portion extends more than 5 feet into the water column at the point of separation from the forward cargo hold. Heavy fouling prevented highly accurate measurement but frames were on 16 inch centers. Deck beams appeared to be on 32 inch centers. A 24 inch main deck stringer plate remained intact inside the exposed section of the port bow.

The smallest section of the bow measured 12 feet long and represents the starboard side of the hull. The forward section was covered by sediment and lists to port at an angle of approximately forty-five degrees. The smaller section of the bow was located immediately forward of the forward cargo hold bulkhead. The exposed portion extends 3 feet into the water column at the point of separation from the forward cargo hold. Deck beams associated with the section appeared to be on 32 inch centers and a 24 inch main deck stringer plate remained attached inside the section.

Aft of the sections of the bow, the hull comprising the forward cargo hold has collapsed to the level of the turn of the bilge. That section of the wreck is almost entirely covered by sand, shell hash and concentrations of the fragmented remains of the deck structure. On the starboard side of the cargo hold only a 23 foot section of the hull remains exposed. On the port side of the

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46Certificate of British Registry, 6 April 1864, *Lynx*, BT108-86, PRO.

cargo hold the exposed section of the hull extends 85 feet from the section of port bow to the steam machinery. The forward end of that section of hull structure contains a set of cast iron bitts. That section of the hull is defined by hull plate, frames on 16 inch centers and the remains of a wood bilge ceiling.

Within the exposed confines of the forward cargo hold three concentrations of material and debris were identified. Near the bow an anchor lies amid the remains of a section of the deck and hatch combings. Midway between the sections of the bow and the machinery and adjacent to the port side of the surviving hull structure, a steam windlass lies on the bottom. The windlass measured 5 feet in width and 4 feet in length. Two of its four warping heads are exposed. Just forward of the machinery, the bottom surface amidships is covered with debris associated with one of the vessel's boilers.

The major exposed feature of the site is a concentration of steam machinery. That concentration consists of sections of the paddle wheel shaft and the steam cylinders. The largest section of the paddle wheel shaft contains the port paddle wheel hub, the web cranks associated with both oscillating steam cylinders and the eccentric and air pump crank web between the steam cylinders. The crank webs confirm that the stroke of the engines was 5 feet. That section of the shaft is supported by the piston rods which protrude from the intact steam cylinders and four stanchion supported plummer block bearings. The caps of each of the plummer blocks had been removed. The diameter of the steam cylinders measured 4 feet. The air pump intake mounts on top of the condenser and extends up behind the air pump cylinder.

Outboard of the starboard steam cylinder another section of the paddle wheel shaft with the other half of the starboard steam cylinder crank web lies on the bottom. That section of shaft measures 12 feet 6 inches in length and contains a 4 foot diameter 30 inch wide paddle wheel hub. Forward of the hub, the remains of the starboard paddle wheel eccentric and the spokes that controlled the feathering buckets lie on the bottom. Sections of one of the bucket mounts confirm that each bucket was 30 inches in width. Just inside the hull and outside the starboard steam cylinder are the remains of a small steam bilge pump.

Aft of the paddle wheel shaft, steam cylinders and air pump intake are the remains of one of the vessel's boilers. Only a few fragments are exposed on the bottom surface. Those appear to consist of sections of the furnace and fire tube spacer plates. Aft of the remains of the boiler no additional structure was identified.

Mary Celestia

Date of Loss	26 September 1864	
Location of Wreck	**Longitude** 64°42'15"	**Latitude** 32°12'10"

The wreck of the *Mary Celestia* lies in the Atlantic Ocean approximately one half mile south of the Gibb's Hill Lighthouse in Southhampton Parish, Bermuda (Figure 4). The exposed remains of the vessel consist of sections of hull structure and the remains of boilers and machinery associated with the engine room. The surviving structure rests on a sand bottom in 60 feet of water. The hull of the *Mary Celestia* consists of five distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold and stern (Figure 14).

Conclusive identification of the wreck as the remains of the *Mary Celestia* is based on the vessel's location, dimensions and steam machinery. Historical sources confirm that the ship was run on the reefs offshore of Sinky Bay south of Gibb's Hill Lighthouse. The location of the wreck corresponds with the historical description of the area of loss.[47]

Exposed remains at the site are those of an iron paddle wheel steamer. Although the dimensions of the hull were impossible to precisely establish because of disarticulation of the structure, the overall length of the wreck corresponds closely with the 221 foot length of the *Mary Celestia* recorded on that vessel's CBR.[48] A 22 foot beam and 51 foot engine room measurement taken at the wreck correspond closely with the 22 foot 2 inch beam and 51 foot 3 inch engine room dimensions recorded on the *Mary Celestia*'s CBR. The CBR of the *Mary Celestia* also confirms that the vessel was fitted with two engines. Two oscillating engines provided power for the wreck in question.

47*Bermuda Royal Gazette*, 13 September 1864.

48Certificate of British Registry, 28 April 1864, *Mary Celestia*, BT108-11, PRO.

The exposed remains of the *Mary Celestia* consist of three basic concentrations of ship structure. Those include the bow section, engineering space and stern. The remains of the bow were found to consist of a 28 foot 10 inch section extending from the stem aft to the immediate vicinity of a bulkhead aft of the anchor windlass. The bow section lay on the port side which was entirely covered by sediment. An iron anchor davit located 11 feet aft of the stem remained on the starboard side above one of the ships anchors that was partially embedded in the bottom sediment. While exposed wood decking on the bow had almost entirely deteriorated, iron deck beams remained intact.[49]

With the exception of exposed fragments of hull that consisted of hull plate, iron frames, knees and deck beam fragments, little of the ship was visible between the bow and the engineering space. Only the remains of an athwartships coal bunker forward of the forward boiler remained to separate the forward cargo hold from the engine room machinery. From the forward coal bunker aft to a second bunker aft of the after boiler, the remains of the hull were found to survive below the turn of the bilge. Within the confines of the hull were two 16 foot 2 inch by 10 feet 8 inch horizontal fire tube boilers. The top of each boiler formed a 2 foot high, 7 foot 11 inch by 8 foot 11 inch steam chamber equipped with two blow-off valves. Smoke pipes 3 foot 6 inches in diameter provided an exhaust for combustion gasses.[50]

In between the two boilers, the composite paddle wheel shaft formed offset bell cranks for two air pumps amidships and two steam cylinder pistons. Each piston operated in an inverted oscillating cylinder. Both paddle wheels were found to have separated from the shaft at the bell cranks. The starboard wheel remained upright while the port wheel lay outside the wreck amid fragments of the hull and deck structure. Each wheel was fitted with eccentric operated 36 inch wide feathering buckets.[51]

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[49]Watts, "Bermuda and the American Civil War" *International Journal of Nautical Archaeology*, pp. 159-171.
[50] *Ibid.*
[51] *Ibid.*

Aft of the engineering space, little evidence of the hull structure was exposed. Only a 32 foot 7 inch section of the stern could be identified 98 feet 7 inches aft of the after coal bunker. The stern section, like the bow, had collapsed to port exposing a portion of the starboard plate, iron frames and deck beams. The after extremity of the stern contained the rudder head and crank.[52]

Condor

Date of Loss 1 October 1864

Location of Wreck **Longitude 77° 54' 43"** **Latitude 33° 58' 13"**

The wreck of the *Condor* lies in the Atlantic Ocean seven miles south of Carolina Beach Inlet and one mile offshore of the Fort Fisher State Historic Site (Figure 3). The exposed remains of the vessel consist of an extensive amount of hull structure, the remains of three boilers and machinery associated with the engine room. The surviving structure rests on a sand, shell hash and coquina rock bottom in 16 to 19 feet of water. The hull of the *Condor* consists of five distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold and stern (Figure 15). The hull remains are oriented perpendicular to the shoreline with the bow to the east and the stern to the west.

Conclusive identification of the wreck as the remains of the *Condor* is based on the vessel's location, dimensions and steam machinery. Historical sources confirm that the ship was run ashore on Caroline Shoals at the mouth of New Inlet.[53] The location of the wreck one mile northeast of the historic location of New Inlet corresponds favorably with the general description of the area of loss.

Exposed remains at the site are those of a large iron paddle wheel steamer. Although the dimensions of the hull were impossible to precisely establish because of deterioration of the structure, the two hundred and fifteen foot overall length of the wreck corresponds closely with the 220 foot length of the *Condor* recorded on that vessel's CBR.[54] A 25 foot beam and 59 foot engine

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[52]*Ibid.*

[53]S. P. Lee to G. Welles, 7 October 1864, *ORN*, I, 10, p. 531.

[54]Certificate of British Registry, 8 August 1864, *Condor*, BT108-243, PRO.

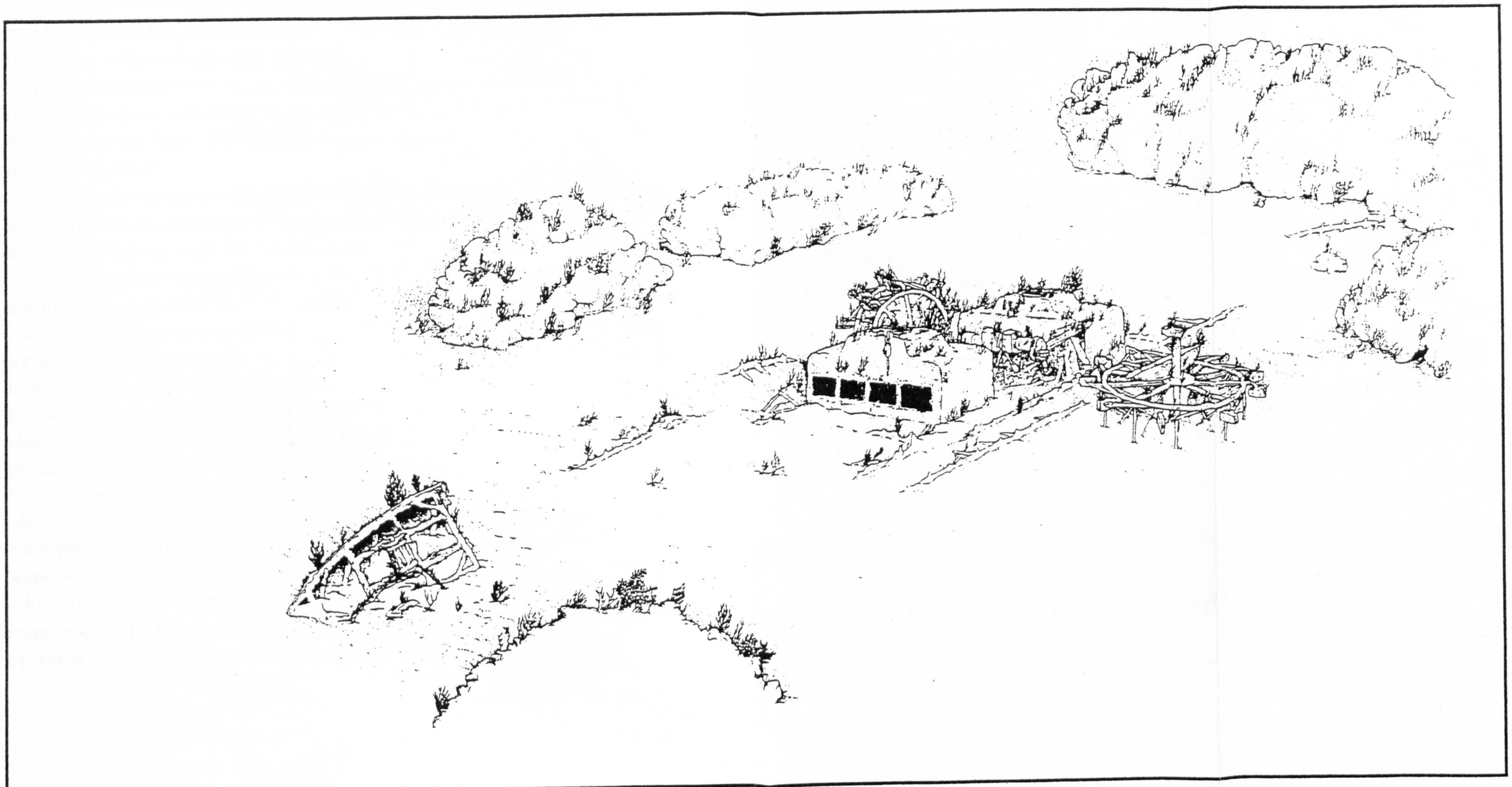

Figure 14. Illustration of the Wreck of the *Mary Celestia.*

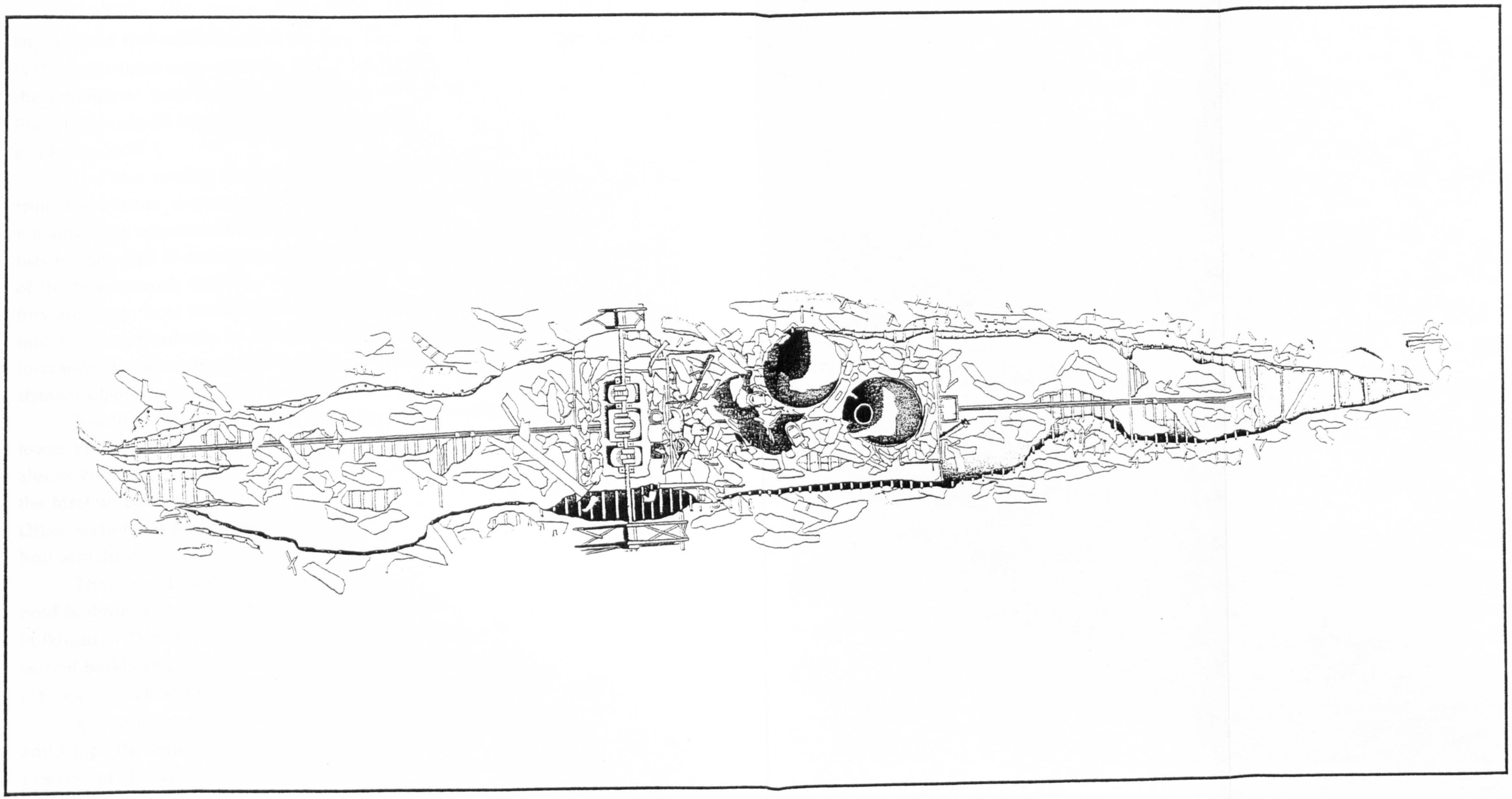

Figure 15. Plan of the Wreck of the *Condor*.

room measurement taken at the wreck correspond closely with the 25 foot 2 inch beam and 59 foot 7 inch engine room dimensions recorded on the *Condor*'s CBR.

The CBR of the *Condor* also confirms that the vessel was fitted with two engines and two oscillating engines provided power for the wreck in question. Perhaps the most conclusive evidence in identifying the site as the *Condor* was the remains of three boilers. The sister ships *Condor, Falcon, Flamingo* and *Ptarmigan* were all equipped with three "haystack" boilers and three distinctive smoke stacks.[55]

The bow section of the *Condor* measured 12 feet long and protrudes from the bottom sediment on the starboard side of the forward lower hull remains. The upper stem and much of the port side is exposed and the section lists to starboard at an angle of approximately 90 degrees. The exposed section of the bow extends from the vicinity of the collision bulkhead forward of the forward cargo hold to the stem. The exposed portion extends less than 4 feet into the water column at the point of separation from the remains of the forecastle. Deck beams appeared to be on 36 inch centers. A 24 inch main deck stringer plate remained intact inside the exposed section of the bow.

Beside the section of upper bow structure the extreme forward end of the lower hull survives below the turn of the bilge. That section of the wreck is almost entirely covered by sand and shell hash and the area immediately aft of the forefoot contains the exposed remains of some of the upper hull structure. Other sections of the bow lie on the bottom outside the remains of the lower hull structure.

The aft end of the forecastle and the forward end of the forward cargo hold is defined by the remains of two bulkheads and a water tank. The first bulkhead is 23 feet 6 inches aft of the exposed remains of the lower bow. The second bulkhead is 5 feet aft of the first. In between the two are the remains of a 4 foot 4 inch long by 12 foot 6 inch wide water tank resting on the floors.

Between the wreckage associated with the bow and the engineering space amidships the hull has deteriorated to the level of the turn of the bilge. The remains of the lower hull are exposed along the entire 50 foot length of the forward cargo hold. Although sand and shell hash covers the bilge to the level of the ceiling, the top of the keelson is exposed and was found to consist of a 10

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[55]Consular Dispatch, Halifax, 26 September 1864, *ORN*, I, 10, p. 484.

inch iron plate reinforced by angle iron riveted to both sides of the top and the bottom. Sockets for iron deck stanchions were located every 3 feet 5 inches along the top of the keelson. The aft end of the forward cargo hold is defined by the remains of a coal bunker and bulkhead. The remains of the 5 foot long and 15 foot wide coal bunker are forward of the bulkhead and do not extend all the way across the hull structure.

The forward section of the *Condor*'s engineering space is characterized by the remains of three "haystack" boilers. The remains of the base of the forward boiler are located 2 feet 8 inches aft of the coal bunker bulkhead. That circular base is located on the centerline of the hull and has a diameter of 12 feet. It contains the ash pits, furnace and vertical fire tubes that extend through the water jacket. The conical smoke chamber was fitted with a 3 foot 7 inch diameter flue. The forward boiler was intact in 1975 but, it had collapsed by 1994.

The bases of two additional boilers of similar dimensions are located immediately aft of the forward boiler. The center boiler base was heavily damaged and offset to starboard. It lies over the hull at the turn of the bilge. Remains of the aft boiler lie on the centerline forward of the steam machinery. The entirety of the hull space dedicated to the boilers is littered with the fragmented components of the boilers. Outside the hull, fragments of the hull are partially exposed on the bottom surface. The remains of a bulkhead between the boilers and the hull of the ship suggest the presence of coal bunkers that run the entire length of the engineering space dedicated to the boilers.

The *Condor*'s steam machinery consists of two oscillating cylinder engines mounted directly below the paddle wheel shaft. Each engine consists of a vertically mounted 60 inch diameter steam cylinder, 6 feet in length. Piston stroke, based on the paddle wheel shaft web cranks, was 4 feet. Each cylinder oscillated on 12 inch diameter trunnions that also admitted steam into and out of the cylinder. A 4 foot 6 inch diameter oscillating air pump was mounted between the two oscillating cylinders and underneath the center crank web. The top of the air pump contained a series of valves that admitted air to the cylinder through heavy rubber impregnated fabric diaphragms. Levers to regulate the amount of steam admitted to the engine and control forward and reverse on the valve chest were mounted on a brass pedestal

behind the air pump. A 5 foot long vertical steam pump lay near the port side of the hull aft of the port steam cylinder.

The paddle wheel shaft measured 34 feet 5 inches in length inside the hubs and each hub was 3 feet wide and 4 feet in diameter. The shaft is supported by six plummer block bearings that are mounted on ten iron stanchions. The caps are missing from each of the blocks. The port paddle wheel hub contained the remains of four sets of spokes and three, 7 foot long by 3 foot wide, iron floats. Each float was mounted on bearings and contained a lever that was connected to an eccentric on the sponson beam by rods. The eccentrically controlled rods changed the orientation of the floats as the wheel turned to produce a more vertical entry and exit from the water. All of the spokes on the starboard hub have been broken and their remains, several floats and eccentric rods lie on the bottom below the hub.

Four feet aft of the steam cylinders another bulkhead defines the aft end of the engineering space and the forward end of the aft cargo hold. That bulkhead is 59 feet 5 inches from the bulkhead associated with the coal bunker forward of the boilers. Between the aft engine room bulkhead and a bulkhead that isolates the stern from the aft cargo hold, the hull of the *Condor* has deteriorated to the turn of the bilge. Although sand and shell hash covers the bilge to the level of the ceiling, the top of the keelson is exposed. It was found to consist of a 10 inch iron plate reinforced by angle iron riveted to both sides of the top and the bottom. Sockets for iron beck stanchions were located every 3 feet 5 inches along the top of the keelson. The hull has broken apart 32 feet aft of the aft engine room bulkhead and the aft section of the keelson and half a dozen floors are suspended in the water column. Outside the hull on the port side, sections of the vessel litter the bottom.

Aft of the cargo hold, the remains of the stern are exposed on the bottom surface. The forward extremity of that section of the hull contains the remains of the bulkhead that separated the after cargo hold from the stern. The 33 foot long section of the stern lists slightly to starboard. The interior of the stern section preserves the main deck stringers and deck beams and the remains of a water tank. The head of the rudder is missing but the rudder itself remains attached to the sternpost. Thirty feet aft of the sternpost the remains of the *Condor* 's round fantail lie partially exposed on the bottom.

Fanny & Jenny

Date of Loss 1 October 1864

Location of Wreck **Longitude 77° 48' 21"** **Latitude 34° 11' 07"**

The wreck of the *Fanny & Jenny* lies in the Atlantic Ocean immediately north of the north jetty at Masonboro Inlet (Figure 3). The exposed remains of the vessel consist of a limited amount of hull structure and machinery associated with the engine room. The exposed structure and machinery protrudes from a sand bottom in 8 feet of water (Figure 16). Based on the orientation of the paddle wheel shaft, the hull remains are oriented perpendicular to the shoreline with the bow to the west and the stern to the east.

Identification of the wreck as the remains of the *Fanny & Jenny* is based on the vessel's location, one hull dimension and the configuration of the steam machinery. Historical sources confirm that the ship was one of four run ashore in the immediate vicinity of Masonboro Inlet.[56] The location of the wreck fifty feet north of the north jetty at Masonboro Inlet corresponds favorably with that general description of the area of loss.

Exposed remains at the site are those of an iron paddle wheel steamer. Although the dimensions of the hull were impossible to precisely establish because of deterioration of the structure and overburden, the 27 foot 6 inch beam measured at the site corresponds with the same figure recorded in a survey of the *Scotia* made in Liverpool on 2 April 1849.[57] That measurement is slightly less than the 28 foot 2 inch measurement for maximum beam for the *Fanny & Jenny* recorded on a copy of that vessel's CBR.[58] The CBR of the *Fanny & Jenny* also confirmed that the vessel was fitted with two side lever engines of the type that provided power for the wreck in question.

Identification of the wreck as a paddle wheel steamer also eliminates the possibility of confusing the *Fanny & Jenny* with the other three Civil War vessels sunk near Masonboro Inlet. Each of those vessels, *Columbia, Dee* and *Emily,* was powered by one or more screw propellers. *Columbia* and *Emily* were single screw vessels and the *Dee* was a double screw sistership of the *Hebe.*

56Pierce Crosby to S. P. Lee, 10 February, *ORN,* I, 9, pp. 473-474 and Pierce Crosby to S. P. Lee, 11 February, *ORN,* I, 9, pp. 474-476.

57Iron Ships Survey, 2 April 1849, Liverpool, NMM, Lloyds Collection at Woolwich.

58Certificate of British Registry, 13 May 1862, *Scotia,* BT108-76, PRO.

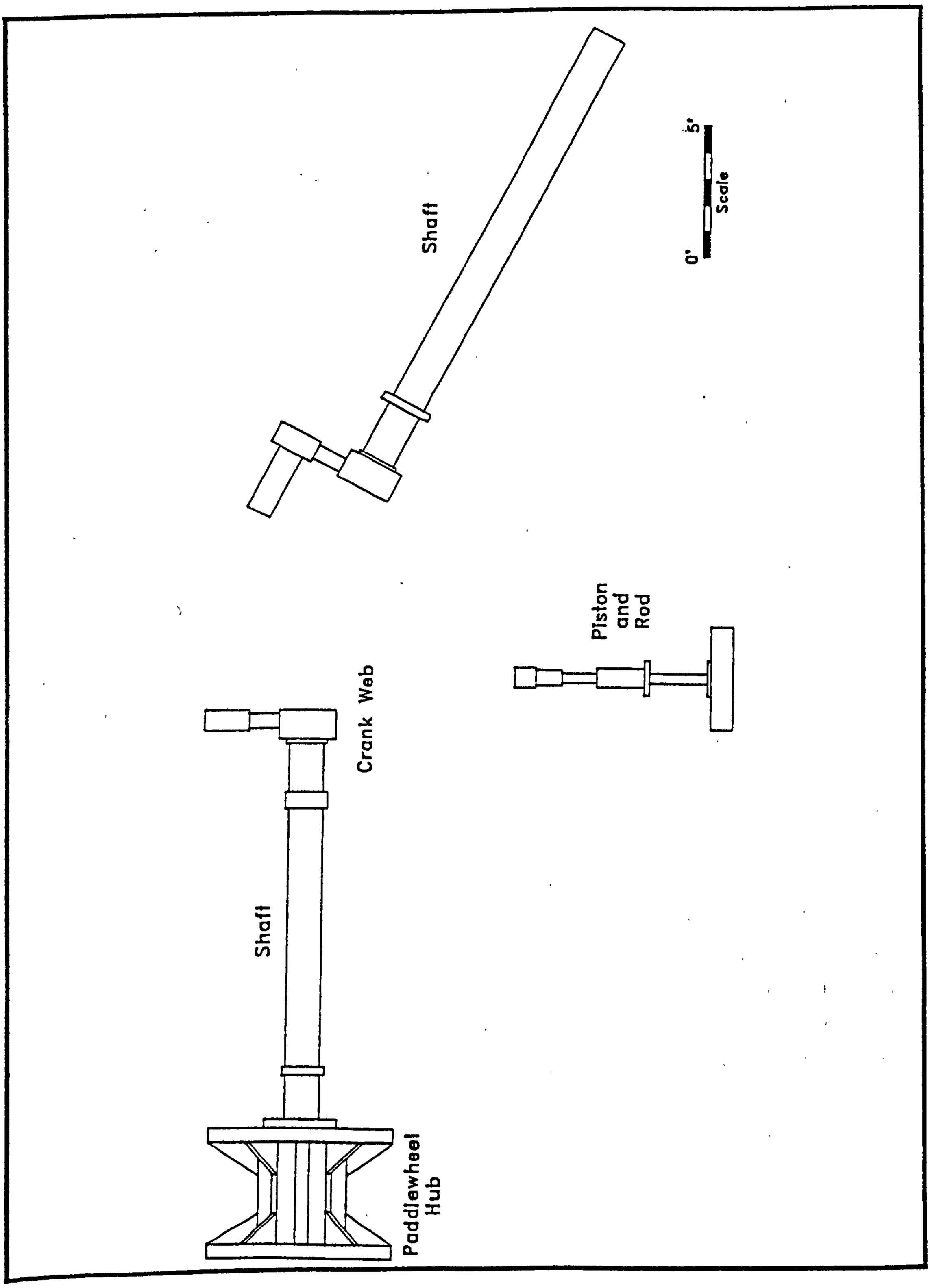

Figure 16. Plan of the Exposed Machinery of the *Fanny & Jenny.*

Exposed wreckage at the *Fanny & Jenny* site consists of the paddle wheel shaft, one hub, plummer block bearings and the paddle wheel shaft deck plate. The deck plate measured 17 feet 4 inches in width and supported four plummer block bearings. Each of the bearing caps and one of the rod caps had been removed. The paddle wheel shaft was constructed with two crank webs designed to accommodate a 56 inch stroke. One of the crank webs remained intact with the piston rod in place but the rod cap missing. The outboard half of the other crank web was missing. Between the two crank webs two 6 inch wide eccentrics were attached.

A 9 foot section of the shaft extends from the intact crank web to the exposed paddle wheel. The hub measured 4 feet in diameter and 3 feet in length. The iron hub was cast with rectangular depressions to facilitate attachment of the spokes. Approximately five feet from the hub, the remains of one of the spokes protruded from the bottom sediment.

The remaining crank web was found 21 feet from the side of the deck plate where the paddle wheel shaft was missing. It was attached to the end of the paddle wheel shaft which protruded vertically from the bottom. No additional structure was exposed at the site.

***Ella* Site**

Date of Loss 1 December 1864

Location of Wreck **Longitude** 78° 00' 02" **Latitude** 33° 50' 57"

The *Ella* Site lies in the Atlantic Ocean two miles east of the mouth of the Cape Fear River and one quarter mile offshore of the south shore of Bald Head Island (Figure 3). The exposed remains of the vessel consist of an extensive amount of hull structure, two boilers and machinery associated with the engine room. The surviving structure rests on a sand bottom in 14 to 19 feet of water. Hull remains at the *Ella* Site consists of six distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold, stern and fantail. The hull remains are oriented parallel to the shoreline with the bow to the west and the stern to the east.

Historical sources verify that the ship was run ashore on the south side of Smith Island (now Baldhead Island). However, identification of the wreck as the remains of the *Ella* is based on local tradition. Evidence at the site and information from the historical record does not support identification of the

remains as those of the Denny-built *Ella*. Drawings and measurements of the fantail of the wreck do not correspond to the design and dimensions of the fantail recorded in the *Ella* plans from the Denny Collection of the National Maritime Museum in Greenwich.[59] Both the plans and the historical record establish that the *Ella* was equipped with two, 42 inch bore by 60 inch stroke oscillating cylinder engines that connected directly to the paddle wheel shaft.[60] Documentation of the 42 foot long paddle wheel shaft at the *Ella* Site confirms that the vessel was equipped with a single oscillating cylinder engine of 50 inch bore and 74 inch stroke (Figure 17).[61] Also the remains of the boilers at the *Ella* Site do not match the design illustrated in the vessel's plans.

While the wreck at the *Ella* Site does not appear to be the remains of the steamer *Ella*, no other identification can be made at present. It is apparent from material recovered from the wreck that the vessel dates from the period of the American Civil War and was carrying material such as Whitworth rifle projectiles, brass locks from New York and Crosse and Blackwell's spice from England.[62] Research has also shown that the vessel's machinery does not match that of the *Antonica/Herald*, *Spunkie* or *Georgiana McCaw* which were also lost off the Old Inlet entrance to the Cape Fear.

When exposed by excavation in 1973, the bow section of the *Ella* measured 23 feet long and was almost completely covered by the bottom sediment. Excavation exposed the stem and much of the forward section is exposed and lists to starboard at an angle of approximately 75 degrees. The exposed section of the bow extends from the vicinity of the bulkhead forward of the forward cargo hold to the stem. The exposed portion extends more than 6 feet into the water column at the point of separation from the forward cargo hold. Heavy fouling prevented highly accurate measurement but frames appeared to be on 18 inch centers. Deck beams appeared to be on 36 inch centers. A 24 inch main deck stringer plate remained intact inside the exposed section of the bow.

59Plans of the *Ella*, William Denny and Company Collection, NMM, Greenwich.

60Certificate of British Registry, 11 July 1864, *Ella*, BT108-243, PRO and I. S. Sampson to T. C. Dunn, 6 December 1864, ORN, I, 11, pp. 132-133.

61Gordon P.Watts, 21 August 1973, *Ella* Site Survey notes on file NCDAH, Fort Fisher.

62Gordon Watts and Leslie Bright, "Progress in Underwater Archaeology in North Carolina, 1962-1972." *International Journal of Nautical Archaeology*, 1973, Vol. 2, No. 1, pp. 131-136.

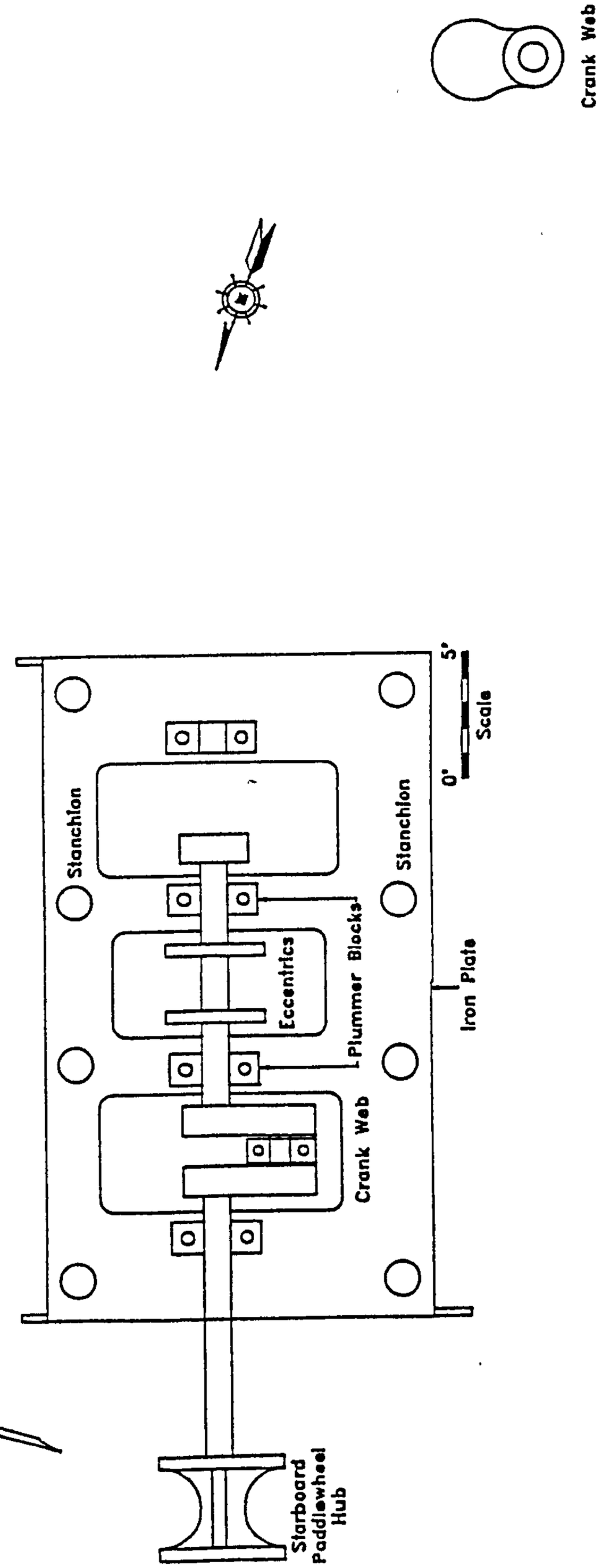

Figure 17. Machinery of the *Ella* Site Wreck.

Aft of the bow the hull comprising the forward cargo hold has collapsed to the turn of the bilge. That section of the wreck is almost entirely covered by sand but the area immediately aft of the bow contains the exposed remains of some of the upper hull and deck. Between that concentration of wreckage and the engineering space amidships sediment covers all evidence of articulated lower hull structure and only a few sections of hull plate were exposed.

The forward extremity of the engine room was defined by the bulkhead at the aft end of the forward cargo hold. The remains of that bulkhead were 5 feet forward of the forward boiler. The aft end of the engineering space is defined by another bulkhead. That bulkhead is 48 feet 6 inches aft of the one that defines the forward extent of the engineering space. Steam machinery at the site consists of the piston from a single oscillating cylinder engine that lies forward of the paddle wheel shaft. The engine consisted of a 50 inch diameter steam cylinder. Piston stroke, based on the paddle wheel shaft web cranks, was 74 inches.

The paddle wheel shaft is separated at the crank web and the port hub is missing. Reconstructed, the shaft originally measured 42 feet from hub to hub. The shaft has been dislodged from its support bearings and the piston rod is separated. Both bolts holding the piston rod cap have been removed as had the plummer block bearing caps. No evidence of an air pump or condenser was apparent in association with the piston.

Five feet aft of the forward engine room bulkhead are the remains of the forward of the *Ella*'s two boilers. The second boiler is mounted 5 feet forward of the aft engine room bulkhead. Each boiler is 10 feet 6 inches in length and 14 feet in width. Both boilers are constructed with three furnaces and the forward face of the forward boiler and the aft face of the aft boiler is fitted with three fire box doors and three ash pits. The tops of both boilers have been destroyed exposing the horizontal fire tubes and a common uptake. The remains of a bulkhead between the boilers and the side of the hull of the ship suggest the presence of coal bunkers that run the entire length of the engineering space.

Between the aft engineering space bulkhead and the remains of the stern, the hull has collapsed and the after cargo hold is almost entirely covered by sand. On the starboard side of the wreck the lower hull is exposed. That section was 51 feet in length and consisted of hull plating, frames on 18 inch centers and a double angle iron bilge stringer. On the port side the hull is also

broken down to a line just above the turn of the bilge. Below the turn of the bilge the remains of wood bilge ceiling survive intact. Much of the remains of the upper hull structure lie along the inshore side of the wreck.

Aft of a break in the exposed hull structure on the port side, the remains of the stern and fantail are exposed. The forward extremity of that section of the hull contains the remains of the bulkhead that separated the after cargo hold from the stern. The 37 foot long section of the stern lists slightly to starboard. The interior of the stern section preserves the main deck stringers and deck beams and the remains of a water tank. The rudder remains attached to the sternpost.

Aft of the aft end of the lower hull, the displaced fantail lies partially exposed on the bottom surface. That section of the wreck contains the deck structure, bitts, stanchions and the head of the rudder post along with the tiller bar. Below the fantail stringer plates, the transom plates contained 11 inch openings for three missing port lights.

Stormy Petrel

Date of Loss	7 December 1864	
Location of Wreck	**Longitude 77° 54' 25"**	**Latitude 33° 57' 25"**

The wreck of the *Stormy Petrel* lies in the Atlantic Ocean one mile southeast of Fort Fisher and one mile offshore (Figure 3). The exposed remains of the vessel consist of a small amount of hull structure, part of one boiler and a concentration of machinery (Figure 18). The surviving structure rests on a sand bottom in 24 feet of water. There is not sufficient exposed structural remains to establish the orientation of the hull. However the machinery and one of the superheaters suggests that the wreck lies on a southeast/northwest axis.

Conclusive identification of the wreck as the remains of the *Stormy Petrel* is based on recovery of the ship's bell.[63] The name "Stormy Petrel" had been engraved on the bell. Although perhaps unnecessary, the vessel's location, dimensions and steam machinery support identification of the wreck as the *Stormy Petrel.* Historical sources confirm that the ship was run ashore

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63 Richard Lawrence, *et. al.*, National Register of Historic Places Nomination for Cape Fear Civil War Shipwreck District, 1985.

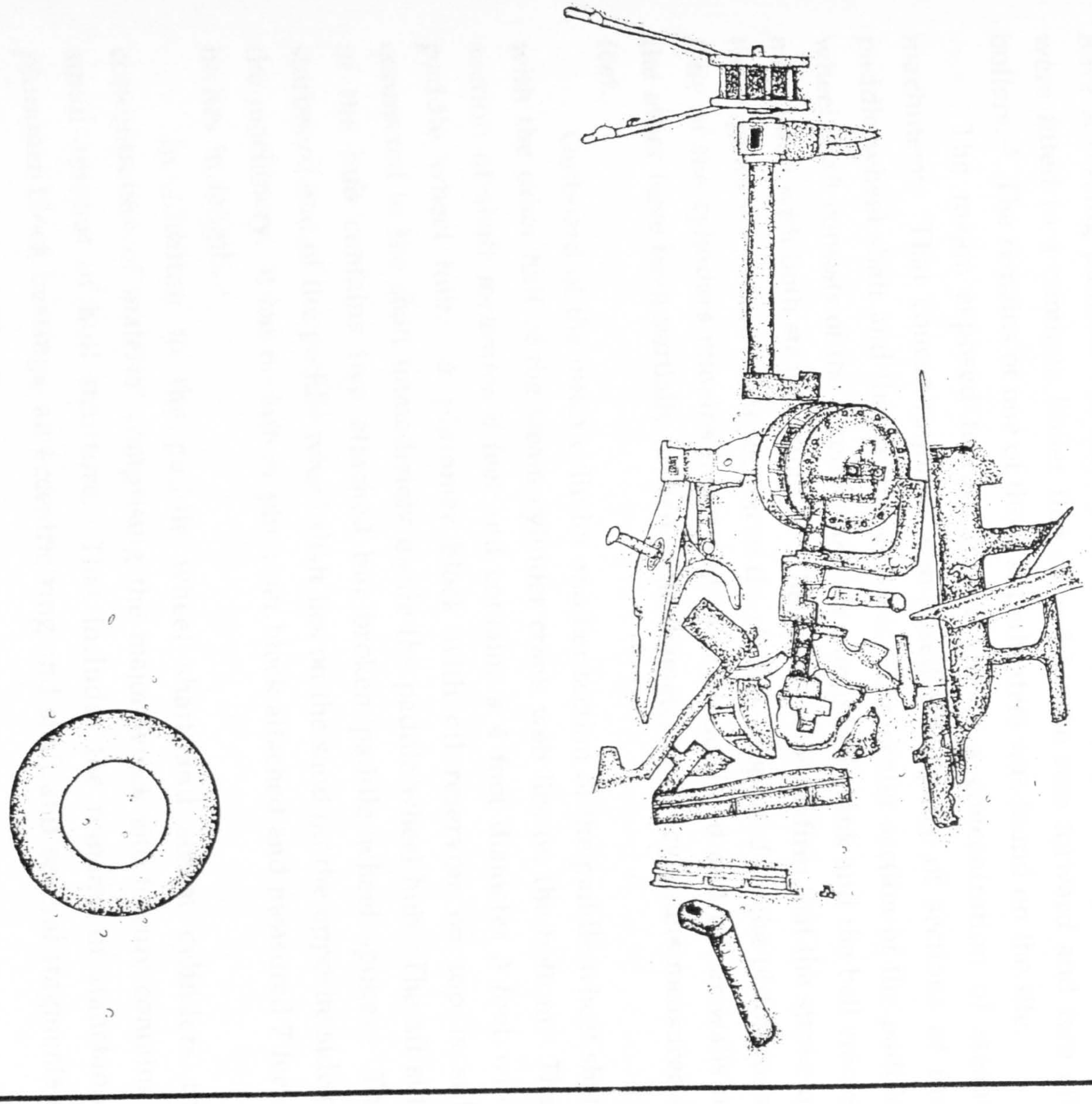

Figure 18. Plan of the Exposed Machinery of the *Stormy Petrel*.

on the outer extremity of Caroline Shoals off the mouth of New Inlet.[64] The location of the wreck one mile east of the historic location of New Inlet corresponds favorably with that general description of the area of loss.

Exposed remains at the site are those of a steel paddle wheel steamer. Although the dimensions of the hull were impossible to establish because of the almost complete deterioration of the structure, the exposed machinery confirmed that the vessel was fitted with two oscillating cylinder engines. The CBR of the *Stormy Petrel* confirmed that the vessel was fitted with two engines. Rare surviving plans of the *Stormy Petrel* also identify two superheaters that were fitted to a common boiler flue shared by the two forward and two aft boilers.[65] The remains of one of those superheaters was found on the site.

The major exposed feature of the site is a concentration of steam machinery. That concentration is composed principally of sections of the paddle wheel shaft and the steam cylinders. The center section of the paddle wheel shaft consists of the eccentric and air pump bell crank and the bell cranks associated with both steam cylinders. The crank webs confirm that the stroke of the engines was 4 feet. That section of the shaft is supported by the piston rods. One of the cylinders remains intact and the cylinder head and upper walls of the other have been partially broken. The diameter of the cylinders measured 4 feet.

Outboard of the intact cylinder another section of the paddle wheel shaft with the other half of the steam cylinder crank web lies on the bottom. That section of shaft measures 8 feet and contains a 4 foot diameter 3 foot wide paddle wheel hub. A plummer block with oil reservoir on top is still connected to the shaft immediately inside the paddle wheel hub. The aft side of the hub contains two attached but broken paddle wheel spokes. The starboard end of the paddle wheel shaft lies on the sand on the opposite side of the machinery. It has no hub or plummer block attached and measured 7 feet 3 inches in length.

In addition to the paddle wheel shaft and steam cylinders the concentration of material comprising the major wreck site feature contains a small amount of hull structure. That includes the remains of stanchions, plummer block bearings, an eccentric ring and shaft and several fragments of

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[64]Diary of Colonel William Lamb, 7 December 1864, College of William and Mary.
[65]Plans of the *Stormy Petrel*, William Simons and Company Collection, University of Glasgow, Glasgow.

the deck structure that supported the paddle wheel shaft. Forward of the major concentration of material nothing was exposed on the bottom surface but several plates and the remains of what appeared to be a water tank.

Aft of the major concentration of material a superheater that could still be attached to one of the boilers was identified. The superheater was 4 feet in diameter. The interior flue was 2 feet in diameter and the walls were 2 feet in diameter. Beyond the superheater two sections of hull were exposed. The largest was 13 feet in length and contained the remains of six frames. The smallest was 12 feet 6 inches in length and appeared to be a section of main deck stringer plate.

Nola

Date of Loss	31 December 1864	
Location of Wreck	**Longitude** 64°54'46"	**Latitude** 32°21'32"

The wreck of the *Nola* lies in the Atlantic Ocean six miles northeast of Dockyard on Ireland Island, Somerset (Figure 4). The exposed remains of the vessel consist of an extensive amount of hull structure, the remains of two boilers and machinery associated with the engine room. The surviving structure rests on a sand bottom between coral formations in 16 to 28 feet of water. The hull of the *Nola* consists of five distinct elements. Those include the bow, forward cargo hold, engineering space amidships, aft cargo hold and stern (Figure 19).

Conclusive identification of the wreck as the remains of the *Nola* is based on the vessel's location, dimensions and steam machinery. Historical sources confirm that the ship was run ashore attempting to enter Western Blue Cut during a gale.[66] The location of the wreck at Western Blue Cut corresponds with that description of the area of loss.

Exposed remains at the site are those of a large iron paddle wheel steamer. Although the dimensions of the hull were impossible to precisely establish because of disarticulation of the structure, the overall length of the wreck corresponds with the 228 foot length of the *Nola* recorded on that vessel's CBR.[67] A 25 foot beam and 60 foot engine room measurement taken at

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66*Bermuda Royal Gazette*, 5 January 1864.

67Certificate of British Registry, 31 November 1863, *Nola*, BT108-242, PRO

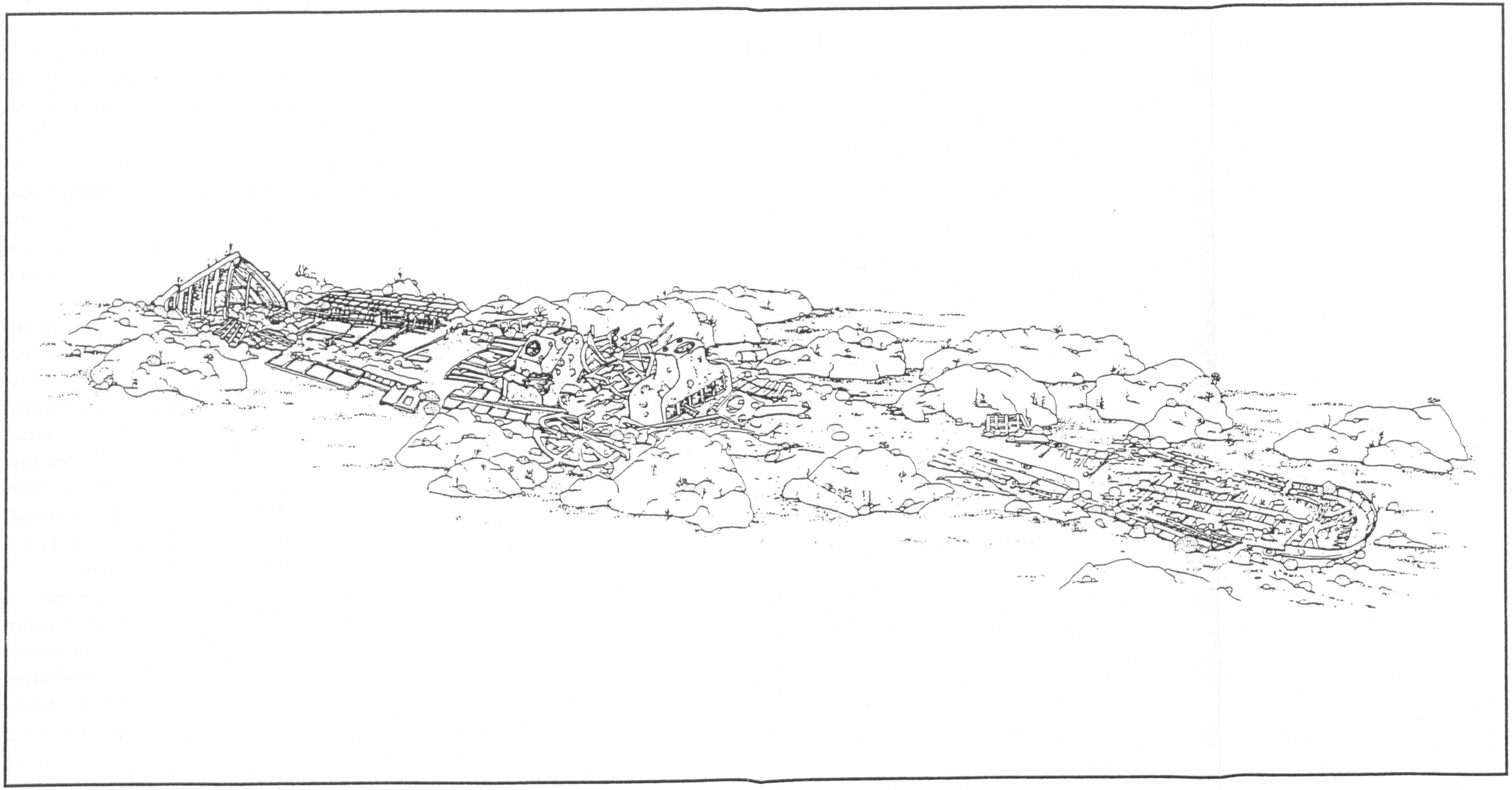

Figure 19. Illustration of the Wreck of the *Nola.*

the wreck correspond closely with the 25 foot 2 inch beam and 59 foot 7 inch engine room dimensions recorded on the *Nola'* s CBR. The CBR of the *Nola* also confirmed that the vessel was fitted with two engines and two oscillating engines provided power for the wreck in question.

The surviving remains of the *Nola* are almost entirely exposed on the seabed. While the paddle wheel shaft, pistons and portions of the cylinders have been removed by salvors, the collapsed hull structure represents almost 80 per cent of the ship. The remains of the bow were found to consist of a 29 foot 10 inch section extending from the stem aft to the immediate vicinity of a watertight bulkhead aft of the forecastle. The bow section lies on the starboard side supported by coral heads that border the sand channel containing the wreck. While exposed, wood decking on the bow has deteriorated iron deck beams, frames, hatch combings, hawse throats; and hull plating remain intact.[68]

Aft of the intact section of the bow, exposed fragments of the hull that compressed the forward cargo hold were found throughout the sand channel between the bow and forward boiler of the *Nola.* Iron beams from the deck were found to have collapsed over 76 foot 6 inches of the lower hull structure between the bow and forward boiler. Watertight bulkheads at the bow and forward coal bunker have also collapsed into the hull. Major fragments of the hull above the turn of the bilge were found to have collapsed away from the structure and lie atop coral on the starboard side and sand on the port side of the hull remains. As very little sediment has accumulated, the entire structure is accessible for investigation.[69]

Although the engineering space of the *Nola* has been damaged by salvage activity many important features of the vessel survive. Immediately forward of the engineering space a watertight bulkhead has collapsed concealing most of the forward coal bunker. The port side of the forward horizontal fire tube boiler of the *Nola* has been damaged by salvage activity, and the structure has collapsed revealing such interior features as the ash pits, fire boxes, fire tubes and steam collector pipes. From the forward coal bunker aft to a second bunker aft of the after boiler, the remains of the hull were found

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68 Gordon P. Watts, Jr., "Bermuda and the American Civil War: a reconnaissance investigation of archival and submerged cultural resources." *International Journal of Nautical Archaeology,* Vol. 17, No. 2, 1988, pp. 159-171.

69 *Ibid.*

to survive below the turn of the bilge. The sides of the hull and paddle boxes have fallen away from the ship and lie on coral on the starboard side and sand on the port side of the hull. Aft of the engine room, a second horizontal fire tube boiler survives virtually intact separating the remains of the after coal bunker from the engineering space amidships. Within the confines of the lower hull structure and between the two boilers, the surviving but extensively damaged remains of the *Nola*'s two inverted oscillating steam cylinders and machinery lay amid coal from the bunkers. The top of each boiler formed a 5 foot 11 inch high, 7 foot 7 inch by 7 foot 4 inch steam chamber equipped with two blowoff valves. Smoke pipes 4 foot 4 and $^1/_2$ inches in diameter provided an exhaust for combustion gasses. Both paddle wheels were found to have been heavily damaged by salvors' efforts to remove the shaft. The starboard wheel had collapsed into the hull structure between the boilers, while the remains of the port wheel lay outside the wreck amid fragments of the hull and deck structure. Each of the 20 foot diameter wheels was fitted with eccentric operated feathering buckets.[70]

Aft of the engineering space, the remains of a watertight bulkhead that isolated the after cargo hold and fragments of an iron deck that protected the engine room lay amid a concentration of coal from the after bunker. As historical records confirm, the after section of the ship separated as the vessel broke apart in heavy seas. The remains of the aft cargo hold lie 141 feet southwest of the amidships section of the *Nola*. Like the bow, the stern has separated from the amidships section of the hull. The after cargo hold watertight bulkhead remains virtually intact inside the stern structure.[71]

While most of the stern structure has collapsed away from the intact lower hull, the starboard side of the aft cargo hold has fallen into the hold. Aft of the cargo hold, the lower stern structure survives intact below the turn of the bilge and contains features such as a fresh water tank. Like the forward section of the wreck, the deck structure in the stern has collapsed into the hull. The distinctive elliptical fantail has separated from the lower hull and lies upright in the sand aft of the hull structure.[72]

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[70] *Ibid.*
[71] *Ibid.*
[72] *Ibid.*

Implications of the Wreck Surveys

Examination of eighteen wrecks in North Carolina and two additional sites in Bermuda generated some new insight into blockade running and the vessels that were employed in the trade. That research suggests that the hulls have a characteristic way of breaking up and deteriorating. The hulls of virtually every wreck were found to have highly similar characteristics. Forward of the watertight bulkhead at the forward end of the forward cargo hold the bow sections remained virtually intact although each one was found to list heavily to starboard or port.

The forward cargo holds proved to be intact below the turn of the bilge and the sides of the hull and deck beams were scattered across and outside the hold. The engineering space, with the exception of the bow and stern, perhaps the most strongly constructed section of the hull, almost inevitably survived to a point above the turn of the bilge and contained the remains of the boilers and machinery. Because of their substantial construction, boilers were generally found in excellent condition unless an effort had been made to destroy them. Machinery, like the boilers, was of heavy construction and survives in a generally excellent state of preservation. Exceptions were almost always related to historically documented efforts to destroy the vessel or subsequent salvage activity.

Like the hull structures associated with the forward cargo holds, that associated with the aft cargo holds was inevitably found to have collapsed to the turn of the bilge. The sides of the hull and deck beams were scattered across and outside the bottom of the hulls. Aft of the aft holds, the hulls were universally found to have broken at the location of the aft cargo hold bulkheads. The sterns at most of the wreck sites were well preserved and virtually intact below the fantail. In most cases the fantails were intact but had broken away from the hulls and lay close by on the sea bed. That pattern is surprisingly consistent throughout the vessels examined.

Examination and documentation of the hull remains of blockade runners confirmed that vessel construction was highly regulated. Historical research revealed that construction requirements were spelled out by the insurance industry. Scantling dimensions and configuration within the hull were required to meet highly specific design criteria identified by the insurance underwriters. A comparison of the iron ship survey data for the steamers

Modern Greece, Peterhoff, Scotia, Douro, Don and *Hebe* confirmed the strict adherence to those requirements. An examination of contemporary records concerning the design and construction of iron and steel vessels also illustrates the uniform requirements for construction material. Iron and steel employed in building ships was industrially produced and standardization was the backbone of the industrial process.

This research suggests that much of the material and construction data for iron steamers such as those employed to run the blockade can be found in historical sources. However, data concerning the actual configuration of each individual hull may only be preserved at the wreck site. Only a few plans for blockade runners are known to survive. Those consist of the *Phantom, Ella* and sister ship *Annie,* the *Will of the Wisp* and sistership *Julia,* the *Dare* and sistership *Fergus, Stormy Petrel* and sistership *Mary Bowers* and the *Emily.* Additional hull configuration information for the *Dare, Colonel Lamb, Denbigh, Rosine* and a few other blockade runners survives in their builders' models. With few exceptions, information on the configuration of blockade runner hull forms can only come from the structural remains of the vessels themselves.

While those data comprise one of the most important attributes of a wreck site, the present condition of most hulls makes documentation and reconstruction a difficult, expensive and time consuming task. In considering the condition of the wrecks examined by the author, the most effective approach to recovery and reconstruction of those data would appear to be to focus recording and documentation on the bow and stern where lines are most complex and structural preservation the most complete. Additional documentation could consist of sections of the wreck taken at the watertight bulkheads and engine room. That level of recording should provide sufficient data to permit a reasonable reconstruction of the hull form.

One of the most valuable assets of the wrecks of blockade runners is the steam machinery. Although patent data and contemporary engineering publications provide excellent documentation for the types of engines employed in blockade runners, machinery was often unique to the specific vessel. While the type of oscillating engines that were most commonly employed in the trade were all of a similar general configuration and function, each had its unique dimensions, configuration and associated assembly of air and water pumps, condensers and vibration dampers. Other types of

machinery like the compound engines aboard the *Modern Greece* and *Peterhoff* and the horizontal direct acting engines of the *Hebe, Dee* and *Vesta* represent early configurations that merit additional, highly specific documentation. Both of those machinery types had an impact on the evolution of steam technology in the nineteenth century.

Like steam machinery, marine boilers were produced in a variety of designs. The remains of blockade runners also preserve an important and varied collection of marine boilers. While most represent the return fire tube box type with a square steam collector like those of the *Bendigo, Wild Dayrell* and *Ranger,* others are more unique. The boilers of the *Condor,* for example, are perhaps the most unusual design and represent a "haystack" configuration developed by shipbuilder John Elder and employed in the *Falcon, Flamingo, Condor* and *Ptarmigan.* The boilers of the *Hebe* represent the box design without the steam collector and were constructed as a mirrored pair with a common flue. Those of the *Stormy Petrel* were designed as horizontal cylinders mounted in tandem and connected by a common flue. That type evolved into the high pressure "Scotch" boilers that became one of the most common designs of the late nineteenth century. Many of the boilers of blockade runners like those of the *Peterhoff* and *Stormy Petrel* were fitted with superheaters to dry and increase the temperature of the steam.

Although not all of the thirty steam powered vessels lost on the North Carolina coast have been located and identified, the remains of those that have been confirm that the assemblege represents one of the most comprehensive collections of mid-nineteenth century steamships extant. Historical and archaeological data establish that the wrecks include examples of every class of blockade runner employed in Anglo-Confederate commerce. The remains preserve a unique record of the steam technology employed to effectively circumvent Union efforts to close Confederate ports and isolate the South from sources of foreign supply.

Chapter VI The Phantoms of Anglo-Confederate Commerce

The remains of blockade runners lost on the North Carolina coast represent the entire spectrum of steam powered vessels employed in the trade. An examination of the surviving historical data associated with those and other vessels of the classes employed in blockade running can provide additional insight into the demands of the trade and the technology that was adapted to meet those demands.

Wrecks like the *Modern Greece, Peterhoff* and *Douro* are representatives of the class of oceanic steamers purchased or leased to deliver war materials and commercial cargoes direct from Europe to the South. They were employed prior to the development of the strategy of trans-shipping material through neutral ports in Nassau, Bermuda, Havana and Halifax. Those capacious and seaworthy oceanic steamers proved to be poor blockade runners. Once the option to ship goods through Nassau, Bermuda, Havana and Halifax permitted small fast vessels to be employed for the run through the blockade, the trans-oceanic steamers were relegated to carry cargos only as far as the islands.

The steamers *Kate* and *Elizabeth* represent those readily available southern coastal steamers that were initially pressed into service and provided an effective response to tightening of the blockade during the summer of 1862. However, as steam vessels began to appear in large numbers on the blockade, Confederate agents and firms engaged in blockade running began to purchase faster more seaworthy vessels. Most of those had been designed and built for the British, and occasionally Great Lakes, public and mail transport services. Wrecks of vessels like the *Scotia (Fanny & Jenny), Dundalk (Georgiana McCaw),Herald (Antonica), Havelock (General Beaureguard), Spunkie, Lynx* and *Arabian* were all fast paddle wheel vessels engaged in public transportation and mail service before being purchased and adapted to run the blockade.

As the fast steamers in the public and mail transport service disappeared and vessel prices increased dramatically, contracts for vessels under construction were purchased. The *Pevensey* was one of at least two paddle wheel vessels designed and constructed for the Australian river trade that were purchased for blockade running while under construction. The *Emily* was a single screw propeller being constructed for the Baltic trade before the contract

was purchased. Others, like the Confederate steamer *Phantom*, appear to have been modified versions of previously built vessels with acceptable design criteria.

When the demands of blockade running called for specific design criteria and speed, vessels began to be built for the specific purpose of breaking the blockade. Those vessels combined the most appropriate available technology with hull design criteria specific to both the demands of the trade and the Atlantic coastal environment off southeastern North American. The *Hebe, Venus, Bendigo, Ranger, Wild Dayrell, Dee, Ella, Stormy Petrel* and *Agnes E. Fry* were all built specifically to run the blockade. Of those *Hebe* and *Dee* represented a twin screw design. Contemporary technical literature suggests that their design had specific applications for blockade running. Surviving plans of the *Ella, Stormy Petrel, Venus* and other purpose-built blockade runners suggest that at least some aspects of hull design and construction were a response to specific environmental and economic considerations.

The first steam blockade runners were vessels of convenience. Initially, the demands of the trade were tied to the necessities of trans-Atlantic shipping. Cargo capacity, range and seaworthiness were greater considerations than speed. As the success of the *Bermuda* and *Fingal* demonstrated, large trans-oceanic steamers could deliver cargos from Great Britain to the Confederacy. Ships like the *Modern Greece, Peterhoff* and *Douro* appeared to answer the immediate needs of the blockade runner. All three of those vessels represent auxiliary sail iron steamer designs developed in Great Britain. The *Modern Greece* and *Peterhoff* were larger and designed for more extended voyages and the *Douro* was built for the across channel trade with closer European ports.

The *Modern Greece* was built at Stockton-on-Tees River by Richardson, Duck and Company in 1859. It was built for the Greek and Oriental Steamship Company for voyages to the Mediterranean and Indian Ocean.[1] In 1861, Z. C. Pearson and Company purchased the vessel to support their Baltic trade.[2] The following year, Z. C. Pearson and Company contracted with Thomas R. Oswald

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1 Certificate of British Registry, 25 August 1859, *Modern Greece*, BT108-6, PRO and Iron Ships Survey No. 1945, Stockton, *Modern Greece*, 12 August 1859, NMM, Lloyds Collection at Woolwich.
2 *Modern Greece*, Annual Survey, 15 October 1861, Hull, NMM Lloyds Collection at Woolwich.

and Company of Sunderland to build the *Peterhoff* for their Baltic commerce.[3] When the American Civil War provided other opportunities, both ships were leased to carry cargo to Confederate ports.

Surveys of the *Modern Greece* and the *Peterhoff* confirm the substantial nature of their design and construction. As a consequence of their heavy scantlings and plate, a considerable amount of the hull of both ships survive. Machinery and the percentage of hull space allocated to steam propulsion suggests that cargo capacity was a primary consideration and speed was less important than efficiency and seaworthiness. Both the *Modern Greece* and *Peterhoff* were designed and built with deep holds, 7.5 to 1 length to beam ratios. Only 15% of their hull length and 18% of their tonnage was devoted to steam machinery. That nominal percentage of length and tonnage devoted to propulsion and fuel confirms that speed was secondary to capacity and efficiency.

The *Modern Greece* was 224 feet in length with a beam of 29 feet 3 inches and a depth of hold of 17 feet. The *Peterhoff* was 220 feet in length with a beam of 29 feet 3 inches and a depth of hold of 16 feet 11 inches. Engineering space in the *Modern Greece* was 32 feet five inches in length between bulkheads and that of the *Peterhoff* measured 31 feet. While the *Peterhoff* was equipped with a two cylinder compound engine that developed 90 horsepower, the *Modern Greece* contained a three cylinder engine that developed 120 horsepower. Evidence from the wreck site suggests that the engines of the *Modern Greece* could be an early double expansion compound engine design of the type patented by John Elder. Evidence from the wreck of the *Peterhoff* suggests that the engines of that vessel could be an early triple expansion compound design of the type also patented by Elder. The expansion engine configuration proved to be the most efficient type and during the third quarter of the nineteenth century became the standard in marine steam plants. Although steam was the principal means of propulsion, each of those ships was designed and rigged to be reasonably efficient under sail. Both ships carried a "good and sufficient" suit of sail for their bark rig.[4]

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3 Certificate of British Registry, 20 December 1862, *Peterhoff*, BT108-9, PRO, and Iron Ships Survey No. 232, London, *Peterhoff*, 22 & 31 December 1862, NMM Lloyds Collection at Woolwich.

4 *Modern Greece*, Annual Survey, 15 October 1861, Hull, NMM and *Peterhoff*, Annual Survey, 3 June 1862, Hull, NMM Lloyds Collection at Woolwich.

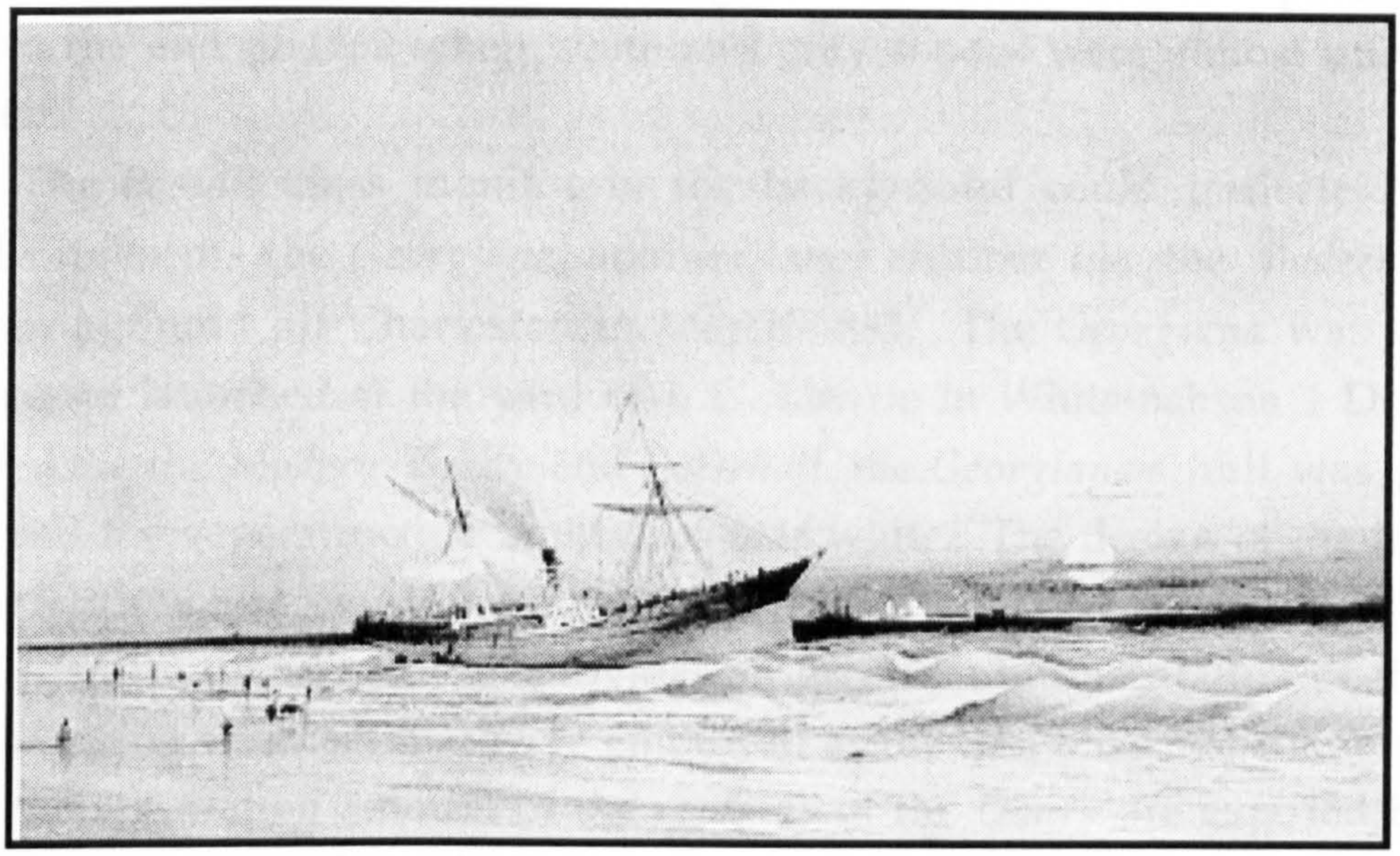

Figure 20. Blockade Runner Ashore.

Contemporary hull surveys indicate that both vessels were built to conform to the specifications or rules for iron vessels of 800 tons developed by British underwriters such as Lloyds, The Liverpool Registry and the Bureau Veritas. Those rules provided uniform specifications for the design and construction of merchant vessels to be insured by British firms.[5] Those specifications were based on more than four decades of industry experience gained in the design and construction of iron vessels.

A contemporary painting titled "Blockade Runner Ashore" illustrates a vessel similar to the *Modern Greece* (Figure 20). The low waist and raised poop and forecastle deck correspond to the design details of the *Modern Greece* and the boiler funnel almost amidships corresponds with the location of that vessel's boiler. The bark rig in the painting agrees with the rig specified for the *Modern Greece* as do the configuration of the bow and figurehead.[6] The traditional paint scheme, black hull and white superstructure is almost

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5 Thearle, Samuel J.P., *Naval Architecture: A Treatise on Laying off and Building Wood, Iron and Composit Ships,* William Collins, Sons, & Company, London and Glasgow, 1876, pp. 267-268.

6 *Modern Greece,* Annual Survey, 15 October 1861, Hull, NMM and Certificate of British Registry, 25 August 1859, *Modern Greece,* BT108-6, PRO.

identical to that of the *Peterhoff* and suggests that the vessel was probably lost prior to the end of 1862 when white and gray shades were almost universally adopted.[7]

The *Passaic* class monitor in the background could indicate that the vessel represents the *Georgiana,* another large steamer like the *Modern Greece* that ran aground off Charleston in March 1863. The *Georgiana* was a Clyde built vessel launched at the yard of J. G. Lawrie in Whiteinch on 1 December 1862.[8] Like the *Modern Greece* and *Peterhoff,* the *Georgiana*'s hull was painted black and the superstructure amidships was white. The design of the hull was similar with a low waist and raised poop and forecastle.[9] Regardless of the actual identity the illustration provides an excellent representation of the class of ocean-going steamers that were employed as the first blockade runners.

Only a limited amount of the remains of the *Douro* are exposed but, the CBR and a survey of the hull provide considerable insight into the vessel's design and construction. The *Douro* was built at Paisley on the Cart River by Blackwood and Gordon in 1853. It was built for John Bibby, Sons and Company for voyages to the Oporto on the Douro River.[10] The *Douro* was 155 feet 8 inches in length with a beam of 22 feet 3 inches and a depth of hold of 12 feet 5 inches. Engineering space in the steamer was 30 feet 3 inches in length between bulkheads.[11] A two cylinder "geared steeple engine" that developed 90 horsepower turned the *Douro*'s patent propeller by means of a 2.5 to 1 gear drive. The *Douro* was designed and built with deep holds, 7 to 1 length to beam ratios and 14% of the hull length and 18% of their tonnage was devoted to steam machinery.[12]

Although steam was the principal means of propulsion, the ship was designed for three masts and rigged as a schooner to be reasonably efficient under sail.[13] The log book of the *Douro,* captured with the vessel on 9 March 1863, provides excellent documentation of the combined use of sail and steam

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7 U. S. Consular Dispatch, London 12 December 1862, *Peterhoff* enclosure, RG 84, NA.

8Dumbarton *Herald,* 4 December 1862 and Iron Ships Survey, S. S. *Georgiana,* 23 December 1862, NMM, Lloyds Collection, Woolwich.

9U. S. Consular Dispatch, London 6 January 1863, *Georgiana* enclosure, RG 84, NA.

10*Douro,* Iron Ships Survey, 8 September 1853, Paisley, NMM, Lloyds Collection, Woolwich.

11*Douro,* Certificate of British Registry, Liverpool #413, 10 September 1853, PRO, London.

12 "Appraisement of the Steam Propeller *Douro*" by Charles H. Pierson, New York, 19 June 1863, RG 100, Regional Archives, New Jersey.

13Certificate of British Registry, 10 August 1853, *Douro,* NA, RG-84 New York Prize Court Records *Douro* # 147.

by the *Douro* on the voyage across the Atlantic to the Bahamas and Wilmington. While steam was consistently used to get into and out of harbors, sail rather than steam was used as expeditiously as possible during the voyage. When weather permitted, the ship was brought up to the wind and the patent screw disconnected. If sailing conditions were favorable, steam was blown off and the boiler fires were banked. Once water in the boiler had cooled sufficiently, it was pumped out to lighten the ship. As necessary during the journey the boiler was refilled, the fires spread and fueled, the propeller reconnected and the voyage continued under steam.[14]

Upon reaching the coast of North Carolina the captain of the *Douro* began to gauge the ship's position carefully to time their arrival off Wilmington for the early hours of the morning on 21 February 1863. At 12:15 a.m. the ship passed three Union warships and came to anchor in three and a half fathoms of water near Fort Fisher. At daylight the anchor was raised and the *Douro* ran in for the New Inlet Bar under fire from the blockading fleet and the guns of Fort Fisher. Unfortunately, the vessel grounded inside the bar and much of the cargo had to be discharged into steamers from Wilmington before the ship could be refloated.[15]

The *Modern Greece, Peterhoff,* and *Douro* are representative of the class of oceanic steamers that were purchased or leased to deliver war materials and commercial cargoes direct from Europe to the South. In spite of the success of the *Fingal* and *Bermuda,* the strategy of shipping material direct from Europe on transoceanic steamers proved to be too risky. During the spring and summer of 1862, Union vessels captured the *Bermuda, Settin, Cambria, Elizabeth, Patras, Tubal Cain, Columbia* and *Lodona.* Like the *Modern Greece, Peterhoff* and *Douro,* the captured streamers were typical high cargo capacity, deep-draft steam vessels equipped with auxiliary sail and designed for efficiency and seaworthyness rather than speed. Clearly those design criteria were not sufficient to ensure success.

As the Union blockade began to tighten during the summer of 1862, Confederate agents and firms such as Fraser, Trenholm and Company quickly recognized that the success of blockade running would depend on a different strategy and faster steam ships. A critical shift in the strategy of blockade

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[14]Log Book of the Steam ship *Douro* #147, New York District Prize Court Records, Regional Archives, New York.
[15]*Ibid.*

runners was made possible by the colonial interpretation and enforcement of British neutrality. At British Nassau, Bermuda and Halifax and in Spanish Havana, blind eyes permitted the trans-shipment of both civilian cargoes and war material. That permitted trans-oceanic sail and steam vessels to deliver goods to the islands with a high degree of immunity to capture by the United States Navy. From the islands small fast steamers could be employed to run goods into Confederate ports and bring cotton, tobacco and naval stores out through the blockade on the return.

The initial solution to the shift in strategy was to obtain the most readily available small and fast steam vessels. John Fraser and Company of Charleston purchased both the *Carolina* (*Kate*) and the *Atlantic* (*Elizabeth*) in response to their initial needs. Both the *Carolina* and *Atlantic* were wood hull coastal steamers and each had been employed on the southeastern coast of the United States before the rebellion. Like the trans-oceanic steamers, they were vessels of convenience. Availability was as important as speed and cargo capacity. Although a few were constructed of iron in yards in New York or Philadelphia, most were the traditional wood hull steamers powered by a walking beam engines. *Carolina* and *Atlantic* were typical of that class of vessel.

Carolina had been built by Samuel Sneden of Greenpoint, New York and launched in 1852.[16] The 477-ton vessel was built of wood and measured 165 feet in length, 29 feet 10 inches in beam and had a depth of hold of 10 feet 4 inches. Constructed for the Florida Steam Packet Company, the *Carolina* was first home ported in Charleston, South Carolina.[17] Under the command of Captain Louis M. Coxetter the *Carolina* was employed in the coastal trade between Charleston, Savannah and small towns along the northeast Florida coast.[18]

When the rebellion disrupted trade along the southern coast, the Florida Steam Packet Company was forced out of business. In December 1861, John Fraser and Company purchased the *Carolina* and changed the name of the

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[16]Lytle, William M., *Merchant Steam Vessels of the United States, 1790-1868.*, Publication No. 6, The Steamship Historical Society of America, Mystic, Connecticut, 1952, p. 26.

[17]Orvin, Maxwell C., *In South Carolina Waters, 1861-1865*. Nelson's Southern Printing and Publishing Company, Charleston, S. C. pp. 35-36.

[18]Mueller, Edward A., *St. Johns River Steamboats*, John A. Mueller, Jacksonville, Florida, 1986, p. 193.

vessel to *Kate*.[19] Under the command of Captain Thomas Lockwood, *Kate* began making regular voyages from Charleston, and occasional voyages from Wilmington and Savannah, to Nassau to support John Fraser and Company's Confederate contract. *Kate* proved to be one of the most successful of the John Fraser and Company vessels and ran successfully until sinking above Smithville in the Cape Fear River after hitting a snag or obstructions in the channel on 18 November 1862.[20]

The *Atlantic* was built by the well known New York shipbuilder William Collyer and was also launched in 1852.[21] The 623-ton vessel was built of wood and measured 216 feet 8 inches in length, 28 feet in beam and had a depth of hold of 9 feet 7 inches.[22] Steam machinery in the *Atlantic* consisted of a walking beam engine with a 40 inch cylinder diameter and a 10 foot stroke.[23] Originally the *Atlantic* was constructed for the Portland Steam Packet Company of Portland, Maine.[24] While owned by that company, *Atlantic* was employed in Maine coastal transportation between Portland and Boston. Four years later, in September 1856, the vessel was sold to the newly formed Southern Steam Ship Company of New Orleans, Louisiana. That firm had been formed by New York financier Charles W. Morgan. The *Atlantic*, along with several other similar ships, was employed in transporting passengers and mail to Gulf coast ports between Mobile, Alabama and Galveston, Texas.

When it was evident that southern states would attempt to leave the Union, Morgan sold the Southern Steam Ship Company to Israel N. Harris of New Orleans. Harris was not successful in breaking the association with Morgan until 1862 after he had been forced to sell the company's assets.[25] Although some of the company's vessels were ordered confiscated for use by the Confederate War Department in January 1862, the *Atlantic* was determined

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[19]Nepveux, E. T. S., *George Alfred Trenholm: The Company That Went to War 1861-1865.*, Comprint, Charleston, South Carolina, 1973, p. 39.

[20]S.P. Lee to Gideon Welles, *ORN*, I, 8, p. 260 and *North Carolina Standard*, 26 November 1862.

[4] *New York Times*, 1852 and Lytle & Holdcamper, *Merchant Steam Vessels of the United States*, p. 13.

[21]*Ibid.*

[22]*Atlantic*, Enrollment Number 156, New Orleans, RG 41, NA.

[23]*Ibid.* and John H. Morrison, *History of American Steam Navigation*, Stephen Daye Press, New York, 1958, p. 392.

[24]Morrison, *History of American Steam Navigation*, p. 392.

[25]Wise, *Lifeline*, p. 75.

to be unsuitable for gunboat service and released.[26] In February A. L.. Davis of Nashville, Tennessee bought the vessel.[27] After the U. S. Navy closed the Mississippi River below New Orleans, that vessel, and several others previously owned by the Southern Steam Ship Company, escaped to Havana through one of the passes at Brashear City, Louisiana.[28] Under the command of Captain John Smith the steamer delivered 1,086 bales of cotton at Havana on 19 April 1862.

Captain Smith continued to run the *Atlantic* between Havana and the Gulf of Mexico ports of New Orleans and Biloxi until September 1862. The following month, Davis sold the ship to John Fraser and Company and the *Atlantic* cleared for Charleston and, under the name *Elizabeth.* There the steamer replaced the *Kate* in trading through the blockade at Bermuda and Nassau under the command of Captain Thomas Lockwood. *Elizabeth* ran successfully until 24 September 1863 when the ship was run ashore and burned by Captain Lockwood at Lockwoods Folly Inlet.

Both the *Kate* and *Elizabeth* are typical of the steamers of convenience employed as a response to running a tightening blockade. Availability was as much, if not more, a consideration in procurement than was design and function. They represented the last phase of wood ship construction and were equipped with steam machinery that was decades old when the Confederate States attempted to secede. Neither vessel was a fast steamer nor were they designed for the open ocean environment. Both vessels had been designed for coastal voyages. The only alterations required to make them effective blockade runners were removing some passenger accommodations to facilitate cargo and a coat of light colored paint to help make them difficult to see. The fact that both were highly successful was as much a factor of the ineffectiveness of the blockade as the ability of Captain Thomas Lockwood. His experience in the coastal trade prior to the rebellion gave him a command of the southern coastline that proved invaluable.

26J. P. Benjamin to M. Lovell, 14 January 1862, *ORN*, II, I, p. 662, p. 667 and Report of Major-General Lovell, 16 January 1862, *ORN*, I, 17, pp. 159-160.

27*Atlantic*, Temporary Enrolement No. 41, New Orleans, RG. 41, NA.

28Wise, *Lifeline*, p. 75; C. J. Helm to W. M. Browne, 6 May 1862, *ORN*, II, 3, pp. 411-412 and U. S. Consul General's Report, *ORN*, I, 17, p. 91-92.

As the limited number of coastal steamers in the Confederacy were captured or destroyed and the price of southern cotton and European manufactured goods and war materials began to increase, firms trading through the blockade and Confederate agents began to look for faster steamers in Great Britain, Canada and even the United States. Wrecks of vessels like the *Scotia (Fanny & Jenny), Herald (Antonica), Dundalk* (*Georgiana McCaw*) and *Havelock (General Beaureguard)* were all fast paddle wheel vessels engaged in British public transportation and mail service before being purchased and adapted to run the blockade. The *Arabian* was engaged in public transportation service on Lake Ontario before being purchased and adapted to run the blockade. Like the coastal steamers of the southeastern United States, they were not designed for blockade running but, their speed, power and relatively shallow draft made them attractive and effective blockade runners.

One of the first of those fast public transport steamers to be purchased in Great Britain to run the blockade was the *Scotia*. *Scotia* was a paddle wheel steamer built at London in 1847. The ship was built by M. and A. L. Wigram and Company at Blackwall for the Chester and Holyhead Railway Company. Wigram and Company built the *Scotia* 195 feet in length, 27 feet 6 inches in beam and 13 feet 5 inches in depth of hold. The engine room measured 56 feet 2 inches in length and contained two steam engines produced by Maudslay and Company.[29] The *Scotia* was designed and built with deep holds, a conservative 7 to 1 length to beam ratio and 29% of the hull length and 29% of their tonnage was devoted to steam machinery.

The *Scotia* was a long low vessel with a raked stem and round fantail stern. The bow was fitted with a forecastle hood to minimize water on the foredeck during rough passages on the Irish Sea. Two raked funnels fore and aft of the paddle boxes were equipped with brass blow pipes and the base of the funnels were enclosed in a deck house amidships. A second small deck house was located aft of the main mast. *Scotia* was equipped with two light raked masts fitted for light schooner rigs.[30]

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[29]Iron Ships Survey, *Scotia*, 8 September 1853, Paisley, NMM Lloyds Collection, Certificate of British Registry, 13 May 1862, *Scotia*, BT 108-76, PRO and Certificate of British Registry, 26 June 1863, *Fanny & Jenny*, BT 108-70 PRO.

[30]Painting of the *Scotia*, Spurling Collection, St. Georges Historical Society, St. Georges, Bermuda.

The *Scotia* was one of four steamers, including *Anglia, Cambria* and *Hibernia,* that Chester and Holyhead Railway Company ran between Holyhead and Dublin.[31] It was operated between England and Ireland until December 1861, when the vessel was sold to J. Dorrington and W. B. Forwood of Liverpool. Dorrington and Forwood dispatched the *Scotia* to Nassau and on to Charleston, South Carolina early in the summer of 1862.[32] During the summer and fall the vessel made several voyages through the blockade between Charleston and Nassau. On 24 October 1862, the *Scotia* was discovered heading for Bulls Bay and captured by the U. S. Bark *Restless.*[33]

The prize steamer was subsequently taken to New York and adjudicated. Being determined unacceptable for naval service, the *Scotia* was condemned and sold to Caleb Price and Henry Whitney of Boston. After at least one trip to Passamaquoddy, the renamed *General Banks* was taken to Halifax, N. S. After the cargo was transferred to the *Will o' the Wisp,* the steamer was sold to Benjamin Wier and Levi Hart. Under the new name of *Fanny & Jenny,* the ship departed for Bermuda on 26 July and arrived on 4 August 1863.[34] During the fall and winter the *Fanny & Jenny* operated between Nassau and Wilmington. On 6 February 1864, the steamer left Nassau under the command of Captain L. M. Coxetter. After making land north of New Inlet on 9 February, Coxetter and pilot Joseph Burriss headed the ship south along the breakers for Fort Fisher. When the USS *Florida* fired on the speeding vessel the pilot panicked and ran the ship on shore before the captain could countermand his orders. The *Fanny & Jenny* was burned by boarding parties from the USS *Florida* before the "Whitworth flying battery" from Fort Fisher could drive the Union vessels away. On 16 February the remains of the steamer were sold at an auction for the benefit of the owners on Exchange Corner in Wilmington.[35]

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[31]Iron Ships Survey, *Scotia,* 8 September 1853, Paisley, NMM Lloyds Collection; Certificate of British Registry, 13 May 1862, *Scotia,* BT108-76, PRO and Certificate of British Registry, 26 June 1863, *Fanny & Jenny,* BT108-70 PRO.

[32]Certificate of British Registry, 13 May 1862, *Scotia,* BT108-76, PRO.

[33]E. Conroy to Captain S. W. Gordon, 26 October 1862, *ORN,* I, 13, pp. 411-412 and S. F. Du Pont to G. Welles, 29 October 1862, *ORN,* I, 13, pp. 409-410.

[34]Extracts Received by S. P. Lee, Liverpool Consular Dispatches, August 1863 and Bermuda Customs Records, In-bound 1862-1863, 4 August 1863, BA.

[35]*Wilmington Daily Journal,* 15 February 1864, *Wilmington Daily Journal,* 16 February 1864., *Wilmington Daily Journal,* 17 February 1864 , and *Wilmington Daily Journal,* 18 February 1864.

Herald, a fast Glasgow to Dublin steamer, was also purchased to run the blockade in March 1862. When the *Herald* was launched in the spring of 1851, it was celebrated as one of the most "magnificent" steamers to be built on the Clyde. John Reid and Company of Port-Glasgow built *Herald* for the Dublin and Glasgow Steam-Packet Company. The iron hull was 200 feet in length, 24 feet 3 inches in beam and had a depth of hold of 13 feet 3 inches. The *Herald* was designed and built with an 8.3 to 1 length to beam ratio. Steam machinery occupied 32% of the hull length and approximately 36% of the tonnage. *Herald* was the first steamer fitted with a spacious on-deck saloon for the comfort of passengers and was considered to be the most luxuriously appointed passenger vessel in service on the Clyde. Like the *Scotia,* the *Herald*'s bow was protected by a forecastle deck.[36]

In addition to having extraordinary accommodations for passengers, J. and G. Thomson of Clyde Bank Foundry fitted the vessel with two 300 horsepower engines. They were a side lever design with 60-inch cylinders and 60-inch stroke. The 23-foot diameter paddle wheels contained fourteen feathering floats each 8 feet 9 inches in width and 3 feet 6 inches in height. The eccentric that controlled the floats was located on the inner side of each paddle wheel. Two tubular boilers were mounted side-by-side in the hull and were connected by a common flue and a single stack aft of the paddle boxes. In test runs on the Clyde between Cloch Lighthouse and Cumbrae Head, a distance of sixteen and one quarter miles, the *Herald* made the trip in one hour and was celebrated as one of the fastest vessels on the river.[37]

Herald ran on the Dublin to Glasgow route until the fall of 1861, when the firm of Cunard Wilson and Company negotiated purchase of the steamer for Fraser, Trenholm and Company of Liverpool.[38] Fraser, Trenholm and Company purchased the vessel to run between Bermuda and the Confederate ports of Wilmington and Charleston with cargoes brought to Bermuda by the steamer *Bermuda* and their other sailing ships.[39] By mid-February the *Herald*

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[36]*Glasgow Herald,* 11 April 1851 and *Glasgow Advertiser,* 20 May 1851, Collingdale Newspaper Library, London.

[37]*Glasgow Herald,* 11 April 1851 and *Glasgow Advertiser,* 20 May 1851, Collingdale Newspaper Library and U. S. Consular Dispatch, Liverpool, 12 February 1862 with enclosed description of the steamer *Herald.*

[38]U. S. Consular Dispatch, Liverpool, 12 February 1862, RG-84, NA.

[39]*Ibid.,* 12 and 14 February 1862.

had been delivered to Liverpool, loaded with extra coal and a cargo of "arms and Munitions of War."[40]

When the *Herald* stopped in Bermuda on 24 March 1862 for coal, the crew discovered that the vessel was destined for Charleston and refused to continue the voyage. Captain Tate acerbated matters, at the urging of U. S. Consul Allen, by going to see the Governor and retaining the Solicitor General. Captain Tate and the mutinous crew refused to be discharged of duties which, under the Merchant Shipping Act, were limited to a voyage to Bermuda and subsequent return to Great Britain. The matter took months to resolve and the *Herald* was not free to leave Bermuda until 11 June 1862. On that date Captain Coxetter cleared the vessel for Nassau and ran to Charleston.[41]

The *Herald* proved to be highly successful and ran between Nassau and Bermuda and Charleston until Fraser, Trenholm and Company sold the vessel to the Chicora Importing and Exporting Company of Charleston. Operating under the name *Antonica,* the vessel continued to make voyages from Nassau to Charleston and Wilmington until December 1863. On the night of 19 December 1863, the *Antonica* was discovered and chased off Wilmington. The following morning at daylight the USS *Fahkee* found the *Antonica* aground on Frying Pan Shoals off Cape Fear. All accessible cargo was removed and efforts to pull the blockade runner off were abandoned after the iron hull began to break up in the surf.[42]

Chicora Importing and Exporting Company of Charleston also bought the steamer *Havelock* from the Dublin and Glasgow Steam-Packet Company. Like the *Herald, Havelock* was a fast Glasgow to Dublin steamer. When the *Havelock* was launched on 13 May 1858, the vessel was described in the *Greenock Advertiser* as a "splendid" steamer named in honor of General Havelock. The vessel was built by J. & G. Thomson and Company of Port-

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[40]*Ibid.*

[41]Bourne Letterbooks, J. T. Bourne to Messers. Fraser, Trenholm & Company, 24 March 1862, BA; Bourne Letterbooks, J. T. Bourne to Messers. Fraser, Trenholm & Company, 8 April 1862, BA; Bourne Letterbooks, J. T. Bourne to Messers. Fraser, Trenholm & Company, 9 April 1862, BA; Bourne Letterbooks, J. T. Bourne to Messers. Fraser, Trenholm & Company, 4 June 1862, BA; Bourne Letterbooks, J.T. Bourne to Messers. Fraser, Trenholm & Company, ND June 1862, BA; Bourne Letterbooks, J.T. Bourne to Messers. Fraser, Trenholm & Company, 14 June 1862, BA and St.Georges Customs Record Book, Outbound 1862, 11 June 1862, BA.

[42]S.P. Lee to G. Welles, 26 December 1863, *ORN*, I, 9, p. 362; E. F. Devens to S. P. Lee, 23 December 1863, *ORN*, I, 9, p. 363; W. G. Saltonstall to S.P. Lee, 25 December 1863, *ORN*, I, 9, pp. 363-365; Statement of Captain W. F. Adair, 25 December 1863, *ORN*, I, 9, pp. 365-366 and Commander J. J. Almy to S. P. Lee, 21 December 1863, *ORN*, I, 9, pp. 366-367.

Glasgow.[43] The iron hull was 223 feet 3 inches in length, 26 feet 3 inches in beam and had a depth of hold of 14 feet 4 inches.[44] The *Havelock* was designed and built with an 8.6 to 1 length to beam ratio. Steam machinery occupied 33% of the hull length and 36% of the tonnage.[45]

J. and G. Thomson fitted the vessel with two 300 horsepower engines that, like those of the *Herald,* were a side lever design with 60-inch cylinders and 60-inch stroke. Eccentrics that controlled the improved feathering floats were located on the outside of each paddle wheel. Two furnace fire tube boilers were mounted back-to-back in the hull and were each connected by a common flue with two stacks aft of the paddle boxes. In test runs over the sixteen and a quarter mile distance between Cloch Lighthouse and Cumbrae head, *Havelock* made the trip in "half a-minute less than the hour." The test was made in a gale and the steamer was "expected to realize great speed" on the Glasgow to Dublin run.[46]

Havelock was fitted with excellent passenger accommodations and was one of the most popular vessels running between Glasgow and Dublin. After more than four years on the Glasgow to Dublin route the *Havelock* was sold on 8 November 1862 to the Chicora Importing and Exporting Company of Charleston. From Glasgow the *Havelock* sailed for Liverpool and took on a cargo and sufficient coal for the trans-Atlantic and departed for Nassau in January 1863.[47] On 27 February the *Liverpool Journal of Commerce* reported the *Havelock*'s safe arrival in Nassau.[48] By that time the *Havelock* had already made the first voyage through the blockade at Charleston.[49] There the name was changed to *General Beaureguard* and placed under the command of Captain Louis M. Coxetter. Until December 1863, the *General Beaureguard* ran between Nassau, and occasionally Bermuda, and the Confederate ports of

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43*Greenock Advertiser,* 18 May and 22 June 1858 and *Greenock Telegraph,* 7 July 1858, Collingdale Newspaper Library.
44Certificate of British Register, 1 July 1858, *Havelock,* BT108-206, PRO.
45*Ibid.*
46*Greenock Advertiser,* 18 May and 22 June 1858 and *Greenock Telegraph,* 7 July 1858, Collingdale Newspaper Library.
47Liverpool Consular Dispatch, 2 January 1863, RG-84, NA and U. S. Consular Dispatch, Liverpool, 6 January 1863, RG-41, NA.
48*Journal of Commerce,* Liverpool, 27 February 1863.
49Wise, *Lifeline,* p. 252.

Charleston, and after July, Wilmington. On the night of 11 December the *General Beaureguard* was run ashore near Flag Pond Battery north of Fort Fisher with a cargo of cotton.[50]

When launched in 1844, the steamer *Dundalk* was considered to be "one of the fastest seagoing vessels afloat."[51] Twenty years later the vessel's speed was still sufficient to attract the attention of Liverpool merchant M. G. Klingender. In April 1864, Klingender purchased the *Dundalk*. On 8 April 1864, the U. S. Consul Francis Adams reported that his informant described the vessels as "a strong, powerful ship" and capable of being converted into an ironclad.[52]

Dundalk had been built for the Dundalk Steam Packet Company by Robert Napier of Glasgow. The steamer's 179 foot length, 26 foot 3 inch beam and 15 foot 6 inch depth of hold was calculated to be 562 tons. A 48 foot 3 inch engineering space amidships occupied 189 of those tons. The *Dundalk* was designed and built with an 6.9 to 1 length to beam ratio. Steam machinery occupied 27% of the hull length and 33% of the tonnage.[53] Two side lever engines of 270 horse power were supplied by three boilers with a common flue and single smoke pipe located aft of the paddle wheels.[54] The engines had 61 inch diameter cylinders and operated on 66 inches of stroke. Paddle wheels were 24 feet 8 inches in diameter and contained 20 floats, each 104 inches long and 25 inches in width.[55]

The vessel was initially operated between *Dundalk* and Liverpool. The iron steamer was described as "a splendid and fast-sailing vessel, which will no doubt, attract many passengers."[56] As a safety feature the *Dundalk* was fitted with four watertight bulkheads that divided the steamer into five compartments. Since the collision of the iron steamer *Vesta* and the *Arctic* off Newfoundland in 1854, shipbuilders had recognized the advantage of

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[50]S. P. Lee to G. Welles, 16 December 1863, *ORN*, I, 9, pp. 354-355.
[51]*Liverpool Mercury*, 1 March 1844, p. 71, col. 5.
[52]U. S. Consular Dispatch, London, 8 April 1864, RG-84, NA.
[53]Certificate of British Registry, 12 April 1864, *Georgiana McCaw*, BT108-86, PRO.
[54]Extracts, Received by S. P. Lee, 30 March 1864 and *Glasgow Herald*, 23 March 1857. p. 8, col. 2.
[55]McOnie Engineers, Dimension Book, UGD 118, 7/1 and Extracts, Received by S. P. Lee, 30 March 1864.
[56]*Liverpool Mercury*, 1 March 1844, p. 71., col. 5.

watertight compartments.[57] In addition to safety considerations, the *Dundalk* contained "tastefully fitted" cabins that left nothing "wanting."[58]

After several years on the Dundalk and Liverpool line the *Dundalk* was sold to F. Mallard and moved to the east coast of Scotland. There it was ported in Leith until 12 April 1864, when the ship was purchased to run the blockade. After obtaining the ship, Klingender took the vessel to Liverpool, changed the name to *Georgiana McCaw* and loaded it with cargo and coal for the Atlantic crossing. Under the command of Captain G. Corbet the *Georgiana McCaw* cleared for Nassau and departed Liverpool on 15 April.[59] After stopping in Nassau the *Georgiana McCaw* cleared for Halifax and headed for Wilmington. At 3 a.m. on the morning of 2 June 1864, the crew of the USS *Victoria* discovered the *Georgiana McCaw* heading for Old Inlet and drove the blockade runner ashore on Long Island west of Fort Caswell.[60]

Not all of the passenger and mail service steamers purchased to run the blockade were built in Britain. Several were Canadian steamers built to provide service on the Great Lakes. One of those vessels was the steamer *Arabian*. The *Arabian* was built by the Niagara Harbor Company in Ontario, Canada in the spring and summer of 1851. After the vessel was launched on 2 July 1851, the *Niagara Chronicle* reported that:

> As neither labor nor money has been spared in order that her hull, engine and machinery might be as strong and perfect as skill and material could make them, so also every needful cost has been incurred in order that the furniture and fittings may combine to render the 'Arabian' in every way worthy [of] the patronage of the travelling (sic) community.[61]

The *Whig Standard* also reported that the wood hull of the *Arabian* was built with an overall length of 182 feet, a beam of 26 feet 6 inches and a depth of hold of 11 feet 6 inches. On deck the vessel was fitted with a full length cabin with

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[57]Alexander C. Brown, *Women and Children last: The loss of the Steamship "Arctic"*. G. P. Putnam's Sons, New York, 1961, pp. 183-184.
[58]Liverpool *Mercury*, 1 March 1844, p. 71.col. 5.
[59]U. S. Consul, Liverpool, 16 April 1864 , RG-84, NA and U. S. Consul, Liverpool, 22 April 1864 , RG-84, NA.
[60]M. Haxtun to S. P. Lee, 5 June 1864, *ORN*, I, 10, p. 114.
[61]*KingstonWhig Standard*, 7 May 1851, p. 2, *Niagara Mail*, 2 July 1851.

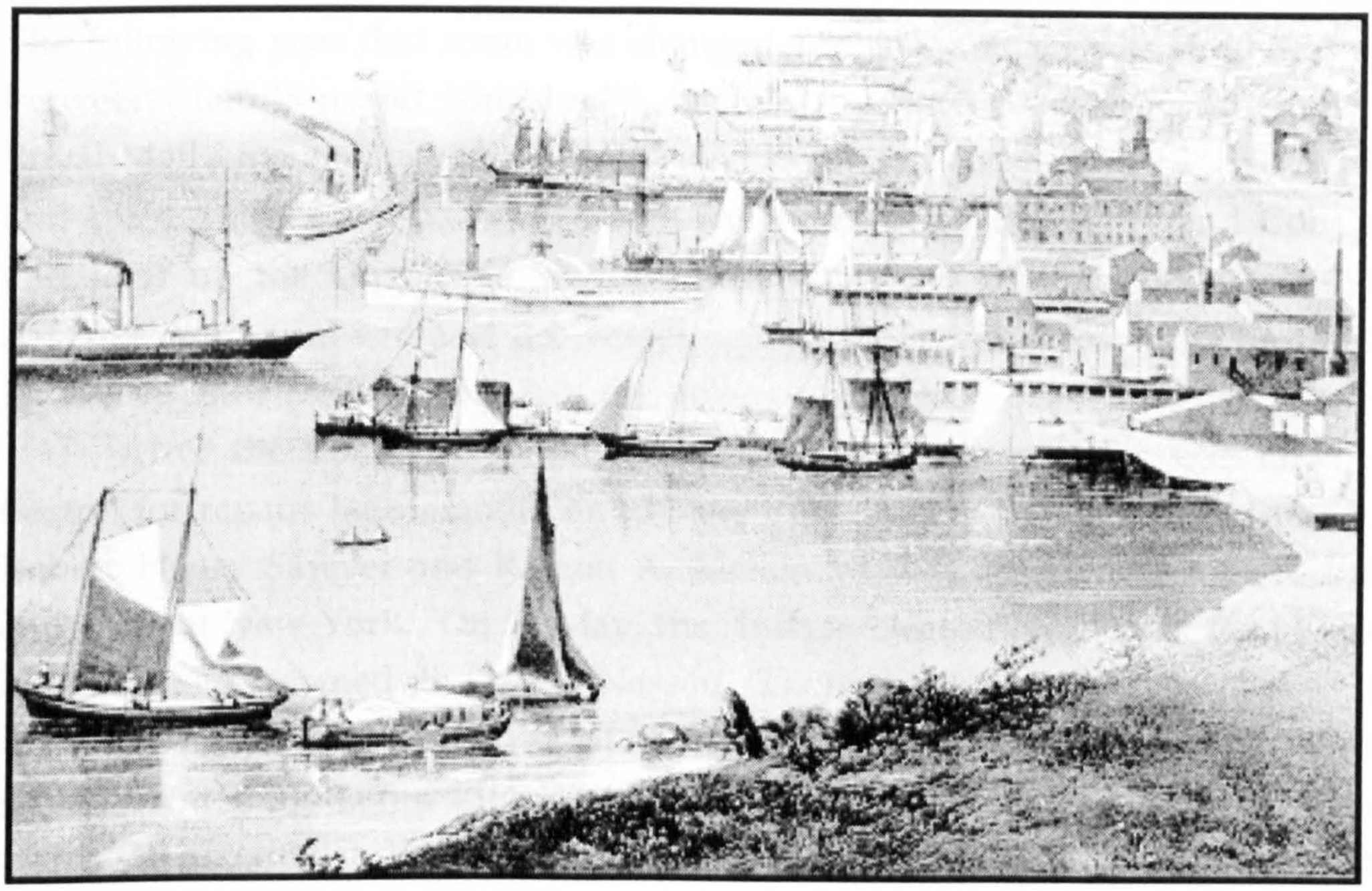

Figure 21. Steamer *Arabian* on Lake Ontario.

state rooms on each side and a dining saloon in the center (Figure 21). In addition to 110 first class berths, the *Arabian*'s passenger accommodations were decorated with stained glass windows.[62]

To ensure sufficient speed, *Arabian* was equipped with a low pressure 300 horsepower walking beam engine. The engine, manufactured by Ridley and Company, turned a 13 $^{1}/_{2}$ inch diameter paddle-wheel shaft equipped with 32 foot paddle wheels with fixed radial floats. Steam was provided by two boilers 23 feet in length and 9 feet nine inches across the face. The boilers shared a common flue and smoke pipe located forward of the paddle-wheel shaft and machinery.[63] Although not the fastest ship on Lake Ontario, *Arabian* was capable of a respectable 15 knots.[64]

Arabian was built for Andrew Heron and placed in service on the "Through Line" between Hamilton and Montreal.[65] When the "Through Line" failed to attract sufficient passengers the *Arabian* was removed from that

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62*Kingston Whig Standard*, 7 May 1851, p. 2.
63*Ibid.*
64*Kingston Daily News*, 29 May 1851.
65*Kingston Whig Standard*, 7 May 1851, p. 2.

service and joined the "Royal Mail Line" between Toronto and Prescott in 1853. The following year that route was changed and the *Arabian* was shifted to run between Hamilton and Kingston.[66] In 1857, *Arabian* was withdrawn from the Royal Mail Line and put to work carrying excursion passengers. Between 1858 and 1859, *Arabian* ran passengers and freight between Rochester and Cobourg and later on the Quebec to Shedic route. In 1859, the upper works of the *Arabian* were removed and the vessel was employed as a tow boat on the St. Lawrence until 1862 when one of the boilers exploded.[67]

After the boiler exploded in October 1862, the steamer was taken to Boston for repairs before going on to New York. There the vessel, registered to Robert Henry Sawyer and Ramon A. Menendez was apparently sold to Brett and Sons of New York. On 14 May, the *Arabian* cleared New York for Havana in ballast and steamed directly to Nassau. There the steamer was painted a "fog color" by a newly recruited crew and, after taking on a cargo of commercial and government freight, ran into Wilmington.[68]

On arriving in Wilmington the vessel was seized and the "Yankee" crew of the *Arabian* were placed under arrest. Clearing up the question of the crew's nationality and the ownership of the steamer required more than a month and it was not until early July that the *Arabian* was cleared by General Whiting at Wilmington.[69] After unloading the cargo, *Arabian* ran back and forth between Wilmington and Nassau until 15 September when the USS *Howquah* and USS *Iron Age* discovered the steamer running out of New Inlet. The Union vessels cut the *Arabian* off, forcing the steamer back toward Fort Fisher before it disappeared in the darkness.[70] Early the next morning the *Arabian* was discovered ashore on Caroline Shoals. While high seas prevented Union boarding parties from boarding the *Arabian*, they quickly destroyed the vessel's wood hull with gunfire.[71]

66*British Whig*, 18 May 1854.

67*Kingston Daily News*, 5 April 1858, 24 March 1859 and 21 October 1862.

68*Ibid.*, 21 October 1862, U. S. Consular Dispatch, Nassau, 15 May 1863, U. S. Consular Dispatch, Nassau, 27 June 1863 and U. S. Consular Dispatch, Nassau, 27 June 1863, RG-84, NA.

69Brigader-General Jordan to Brigader-General Henry C. Whiting, 18 June 1863, Letter No. 2/48/193. NA and H. C. Whiting to J. Seddon, 18 June 1863, Vessel Papers W-386, NA.

70E. E. Stone to S. P. Lee, 16 September 1863, *ORN*, I, 9, p. 202.

71*Wilmington Journal*, 1 October 1863; E. E. Stone to S. P. Lee, 16 September 1863, *ORN*, I, 9, p. 202 and J. B. Breck to S. P. Lee and Log of the USS *Niphon*, 18 September 1863, *ORN*, I, 9, pp. 210-211.

Once the demand for fast steamers like the *Scotia, Herald, Havelock, Dundalk* and *Arabian* exceeded the availability of vessels already in service, Confederate agents and both southern and British entrepreneurs began to buy contracts for vessels under construction and negotiate contracts for the construction of new vessels. Initially, those vessels were designed for other purposes or were based on previously developed designs of the builder. Wrecks of the *Phantom, Venus, Emily* and *Bendigo* represent vessels purchased on the stocks or constructed from previously developed plans. Plans of the Confederate steamer *Phantom* constructed by William C. Miller and Sons for Fraser, Trenholm and Company suggest that the design was not specifically developed for blockade running. The *Venus* built by C. J. Mare for the China Mail Packet Company and the *Bendigo*, built as *Milly*, by William C. Miller were designed for use on Chinese rivers. *Emily*, built by Barclay, Curle and Company, was a traditional design developed for the channel trade that was purchased on the stocks by T. S. Begbie. The *Pevensey* constructed by James Ash and Company and the *Nutfield* constructed by Charles Lungley and Company were designed for service as Australian river steamers. The *Agnes E. Fry* was designed and constructed by Caird and Company for the mail and passenger service between Scotland and Ireland. In spite of the originally intended purpose, each of those steamers met design criteria deemed appropriate for vessels running the blockade in 1863.

William C. Miller and Sons built the *Phantom* 192 feet 11 inches in length, 22 feet in beam and 12 feet 3 inches in depth of hold. The engine room measured 42 feet 4 inches in length and contained two steam cylinders.[72] The *Phantom* was designed and built of steel with 8.7 to 1 length to beam ratios and 22% of the hull length and 35% of the tonnage was devoted to the steam machinery. Machinery consisted of two 170 horsepower direct acting 45 inch diameter 36 inch stroke steam cylinders designed and produced by Fawcett, Preston and Company.[73] A three blade screw propeller approximately 6 feet in diameter pushed the hull. Because of the lightness of steel construction and the fact that the "engines are to be of greater power than is usually placed in

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[72]Certificate of British Registry, 21 May 1863, *Phantom*, BT108-81, PRO.
[73]Fawcett, Preston & Company, Engine Book 1862, Maritime Museum, Liverpool.

vessels of her size", the ship was not expected to make less than seventeen knots. For cargo handling and auxiliary propulsion, *Phantom* was also equipped with two schooner-rigged masts.[74]

A plan of the hull of the *Phantom* was prepared by Gustav Hillman, a German naval architect who visited Liverpool at the time of construction (Figure 22). According to Hillman's plans the vessel had very fine lines and considerable deadrise. Like the clipper ship designs that Hillman was studying, the *Phantom* was built on an external keel that transformed into a gently rising forefoot and graceful sweeping stem. The sweeping counter stern supported a round fantail.[75] Although an apparently fast hull form, the *Phantom*'s keel and deadrise were not desirable attributes for vessels running, and potentially grounding, in shoal water.

The vessel was launched on 21 March 1863 and by 1 May was "approaching completion."[76] By 3 June cargo loaded and the vessel was entered at the Customs House. On 10 June, a crew for the *Phantom* was recruited at the Liverpool Sailor's Home.[77] Under the command of Captain Tessier, the *Phantom* cleared Liverpool and sailed for Nassau on 10 June 1863.[78] Instead of making the voyage to Nassau, Captain Tessier took the *Phantom* to Bermuda. There the ship took on additional coal and cargo and ran into Wilmington under the command of Captain S. G. Porter.[79] Captain Porter took the Confederate steamer into Wilmington again in August but on 23 September 1863, the vessel was chased ashore near Topsail Inlet.[80]

The remains of the steamer *Venus* represent another vessel that was designed and constructed for a purpose other than blockade running before being purchased by Crenshaw, Collie and Company and put into that service. *Venus* was designed by C. F. Heuwood for the China Mail Packet Company to

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[74]*The Engineer*, 27 March 1863, "Notes from the Northern and Eastern Counties" p. 185, U. S. Consular Dispatch 23 March 1863, Liverpool, RG 84, NA and U. S. Consular Dispatch, Liverpool, 25 March 1863, RG 84, NA.

[75]Plan of Steel Steamship Built in Liverpool 1862, in the Gustav Hillman collection at the Mariners Museum, Newport News, Virginia.

[76]U. S. Consular Dispatch, Liverpool, 1 May 1863, RG 84, NA.

[77]U. S. Consular Dispatch, Liverpool, 10 June 1863, RG 84, NA and U. S. Consular Dispatch, Liverpool, 13 June 1863, RG 84, NA.

[78]Extracts, Received by S. P. Lee, 21 June 1863 and Extracts, Received by S. P. Lee, 5 July 1863.

[79]Extracts, Received by S. P. Lee, 5 July 1863, Major Smith Stansbury to Captain S. G. Porter, 16 August 1863, Stansbury Letterbook, BA and Wise, *Lifeline*, p. 235.

[80]J. J. Almy to S. P. Lee, 23 September 1863, *ORN*, I, 9, pp. 216-217.

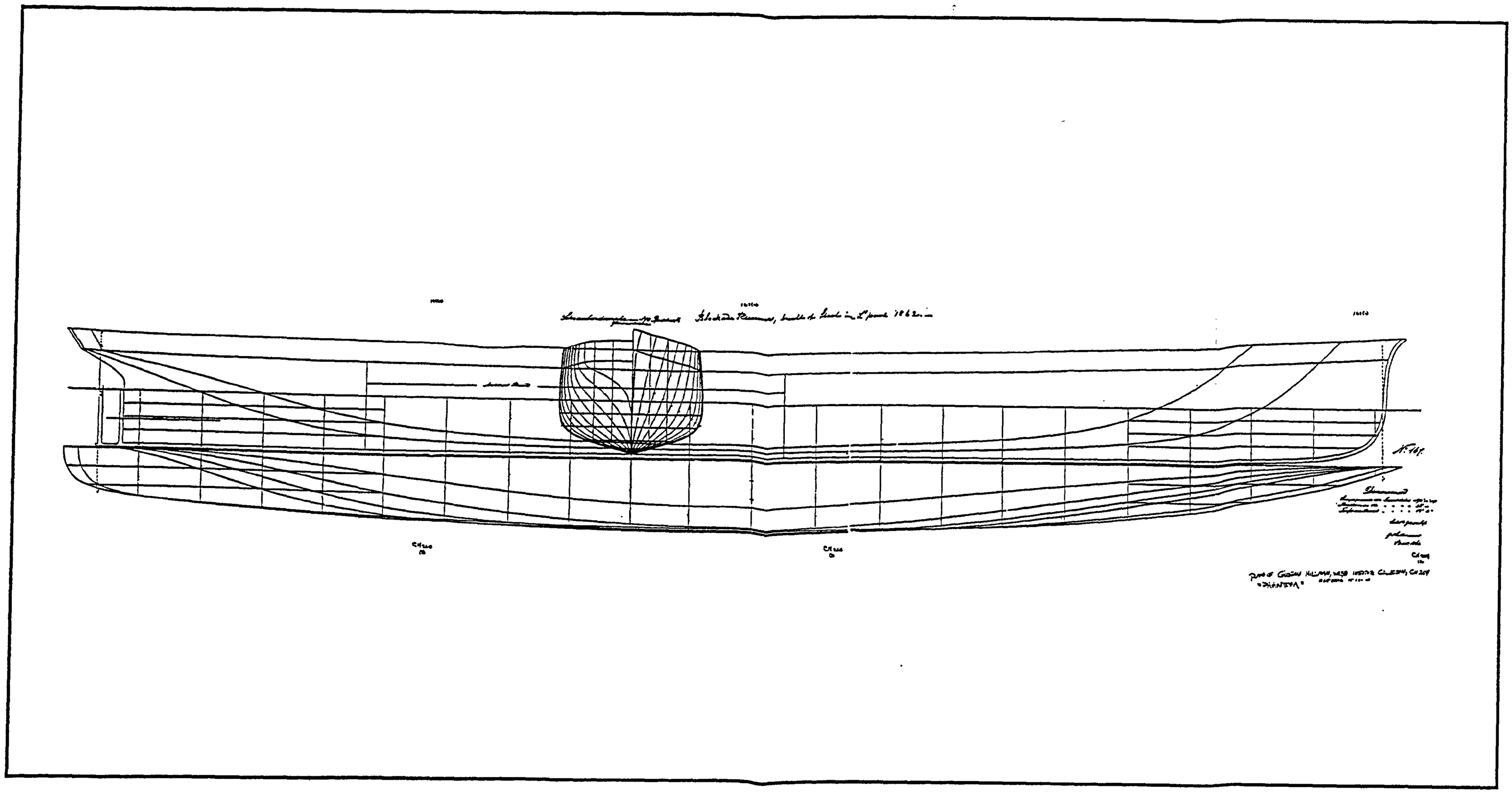

Figure 22. Gustav Hillman Plan of the Steamer *Phantom.*

operate on the Yangtze River.[81] C. J. Mare and Company was selected to construct the iron vessel at their Millwall shipyard. The *Venus* was 239 feet 5 inches in length, 26 feet 1 inch in beam and had a depth of hold of 10 feet 8 inches. The engine room measured 60 feet in length and contained two steam cylinders.[82] The *Venus* was designed and built of "best ship iron" with an 9.2 to 1 length to beam ratios and 25% of the hull length and 31% of the tonnage was devoted to the steam machinery. Machinery consisted of two 240 horse power oscillating cylinders 45 inches in diameter and 48 inches in stroke and connected directly to the paddle wheel shaft. The *Venus* was reported by the captain in command at the time of her capture to have the "finest engines of any vessel in this trade."[83]

A cross section of the hull documented several design and construction features (Figure 11). The configuration of the hull amidships was virtually rectangular in section. Deadrise amidships is marginal and the floors were designed almost flat. No external keel was employed. Instead flat doubled plates were riveted to the floors. Bilges were tightly rounded and the hull above the turn of the bilge was absolutely vertical. An in/out plate pattern was employed with 9/16 inch strakes on the bottom, 1/2 inch strakes at the bilge and 3/8 inch strakes used in construction of the sides of the hull. With the exception of bulb iron beams supporting the deck, angle iron and plate was used exclusively to build the hull.[84]

Venus was launched on 15 March 1863. While the vessel was in the process of being completed, Alexander Collie and Company negotiated the purchase of the steamer from the owner Dadabbai Naoroji. By May 1863, the steamer had been completed and loaded with a cargo that included iron and machinery. On 2 May the vessel was cleared by customs and departed for Nassau.[85] After stopping in Falmouth to repair a damaged windlass, the *Venus* headed for Bermuda and arrived at St. Georges on 10 June 1863.[86] At

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[81]Bowen, *Mail and Passenger Steamers*, p. 292 and U.S. Consular Dispatch, London, 27 March 1863, RG 84, NA.

[82]Certificate of British Registry, 21 May 1862, *Venus*, BT108-10, PRO and *Venus*, Iron Ships Survey, 6 February and 4 March 1863, Millwall, NMM Lloyds Collection.

[83]R. H. Lamson to S. P. Lee, I, I, 9, pp. 249-250.

[84]Section Profile of the *Venus*, Iron Ships Survey Records, NMM, Woolwich.

[85]U.S. Consular Dispatch, London, 8 May 1863, RG 84, NA and Copy of the Bill of Entry for the Steamer *Venus* filed at the Custom House, London, 15 May 1863, RG 84, NA.

[86]U.S. Consular Dispatch, London, 8 May 1863, RG 84, NA and U.S. Consular Dispatch, Bermuda, 12 June 1863, RG 84, NA.

Bermuda the crew of the *Venus* was immediately engaged in painting the steamer white to make the ship more difficult to detect. The steamer's top masts and yards were taken down to reduce the profile (Figure 23a and 23b). After taking on coal and additional cargo the *Venus* cleared for Nassau on 13 June 1863 and headed for Wilmington.[87] Under the command of Captain Ainsley Murray the *Venus* ran successfully until being forced ashore by the USS *Nansemond* north of Fort Fisher near Half Moon Battery on 21 October 1863.[88]

The screw steamer *Emily* was constructed by the Clydeholm firm of Barclay Curle Shipbuilding Company for London merchant Thomas S. Begbie.[89] That iron steamer was 181 feet in length, 22 feet 5 inches in beam and had a 12 foot 1 inch depth of hold. The *Emily* was designed and built of "best ship iron" with an 8.2 to 1 length to beam ratio. The engineering space was 35 feet 1 inch in length and occupied 101 of the vessel's 355 tons. The engineering space required 19% of the hull length and 28% of the tonnage.[90] Machinery consisted of two geared steeple engines producing a total of 80 horsepower.[91]

Upon completion Begbie brought the *Emily* to London under the command of Captain Leslie. At London *Emily* took on coal and cargo before clearing for Nassau and heading for Bermuda under the command of Captain Robert C. Halpin.[92] At Bermuda the ship received a coat of white paint and the crew took down both top masts and yards in preparation to run the blockade. Additional cargo belonging to the Albion Trading Company was loaded from several warehouses in St. Georges.[93] On 3 February, 1864, Captain Halpin cleared customs at St. Georges and sailed for Wilmington.[94] On the morning of 10 February 1864, the *Emily* was discovered ashore immediately north of Masonboro Island and was destroyed by the USS *Florida*.[95]

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[87]Consular Dispatch, Bermuda, 12 and 17 June 1863, RG 84, NA and Bermuda Customs, Outbound, St. Georges, 13 June 1863, BA.

[88]R. H. Lamson to S. P. Lee, 21 October 1863, *ORN*, I, 9, pp. 249-250.

[89]*Dumbarton Herald,* 12 November 1863.

[90]Certificate of British Register, 19 December 1863, *Emily*, BT 108-10, PRO, London.

[91]*Dumbarton Herald,* 12 November 1863.

[92]U. S. Consular Dispatch, London, 20 November 1863, RG 84, NA and Bermuda Customs Inbound, St. Georges, 19 January 1864, BA.

[93]J. T. Bourne to S. I. Campbell & Company, 28 April 1864 and Bermuda Customs Outbound, St. Georges, 3 February 1864, BA.

[94]Bermuda Customs Outbound, St. Georges, 3 February 1864, BA.

[95]P. Crosby to S. P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474.

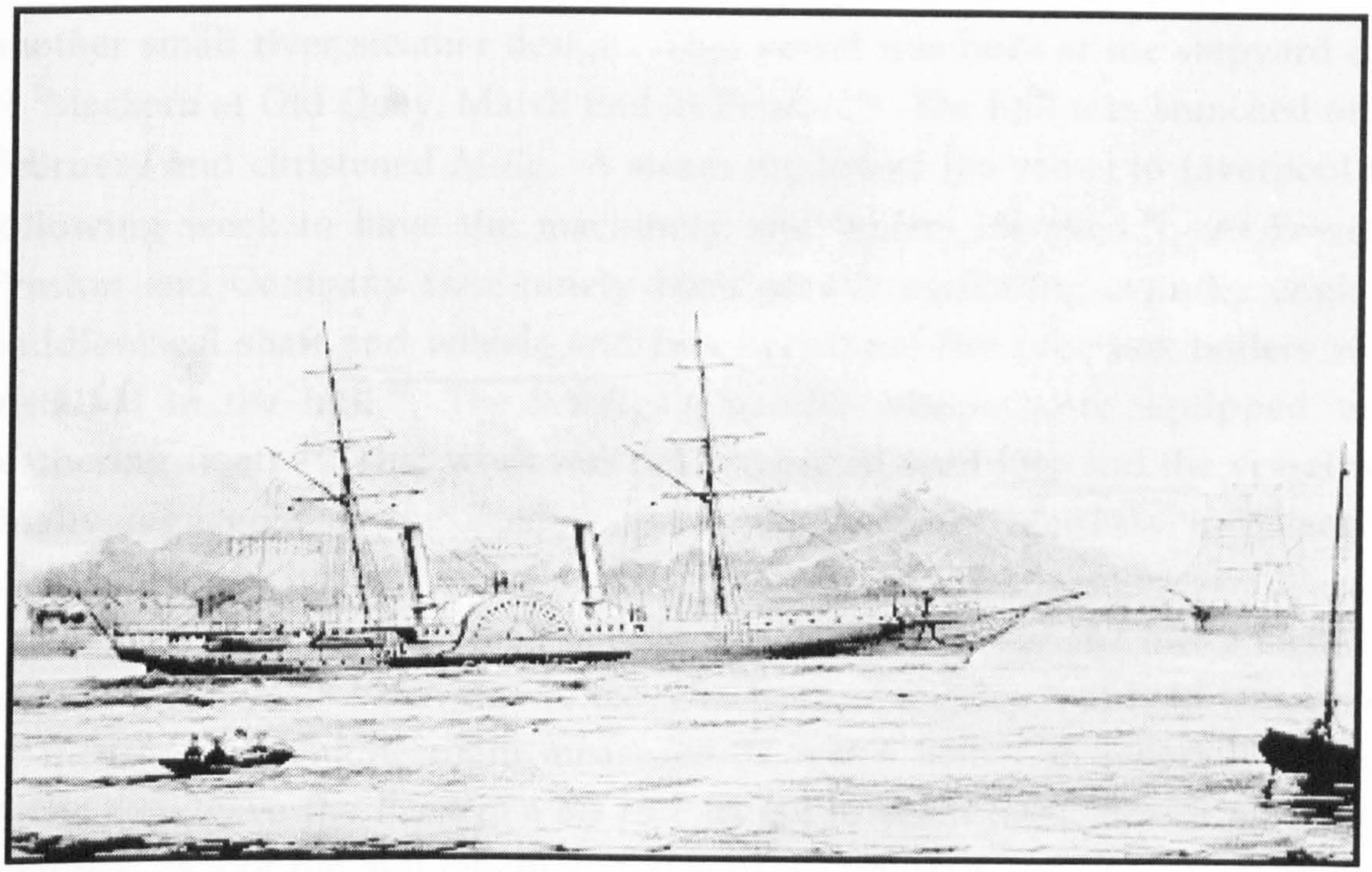

Figure 23a. Steamer *Venus* before taking down the masts and yards.

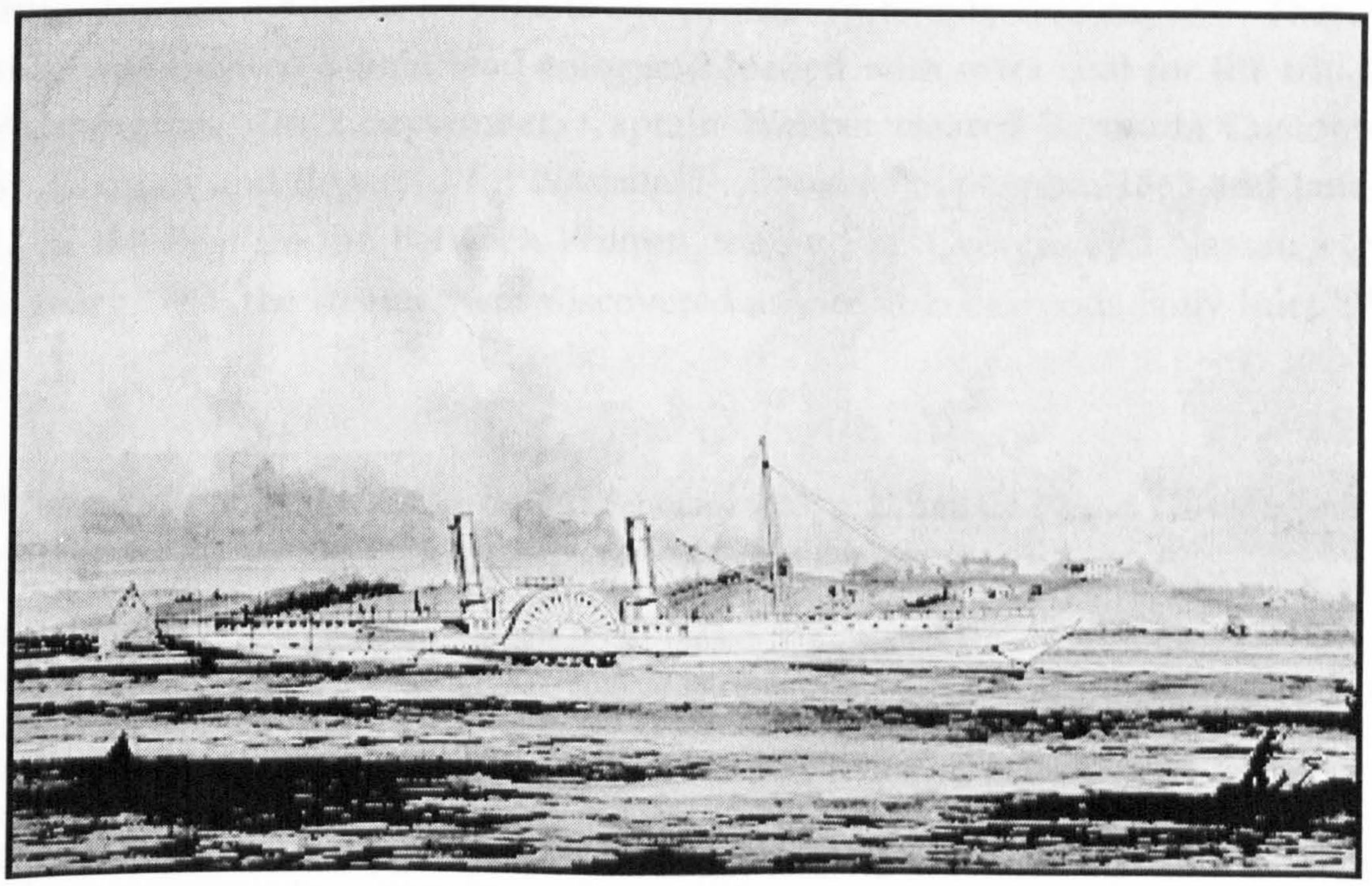

Figure 23b. Steamer *Venus* after taking down the masts and yards.

The remains of the *Bendigo* lost at Lockwoods Folly Inlet represent another small river steamer design. That vessel was built at the shipyard of J. H. Mackern at Old Quay, Marsh End in Preston.[96] The hull was launched on 19 February and christened *Milly*. A steam tug towed the vessel to Liverpool the following week to have the machinery and boilers installed.[97] At Fawcett, Preston and Company two, ninety horse power oscillating cylinder engines, paddlewheel shaft and wheels and two horizontal fire tube box boilers were installed in the hull.[98] The *Bendigo*'s paddle wheels were equipped with feathering floats.[99] That work was not completed until July and the vessel was finally registered as the *Bendigo* under the name of Matthew I. Wilson at Liverpool on 16 July.[100]

The *Bendigo* was a small paddle wheel steamer only 162 feet 2 inches in length. The vessel's beam was 20 feet 2 inches and the depth of hold was 10 feet 11 inches. The engine room measured 38 feet 6 inches in length.[101] Those dimensions gave the *Bendigo* a 8.1 to 1 length to beam ratio. Steam machinery occupied 24% of the hull length and 31% of the tonnage.

After taking on extra coal for the Atlantic passage, *Bendigo* cleared for Madeira and Bermuda on 25 July. Under the command of Captain Webber the little steamer made the voyage to St. Georges in twenty-five days.[102] There the ship was painted a light lead color and loaded with extra coal for the trip into Wilmington. On 2 September, Captain Webber cleared Bermuda Customs at St. Georges and departed for Nassau.[103] Between September 1863 and January 1864, the *Bendigo* ran between Wilmington and St. Georges and Nassau. On 2 January 1864, the steamer was discovered ashore at Lockwoods Folly Inlet.[104]

96*Preston Pilot* and *County Advertiser*, 21 February 1863, p. 2., and the *Preston Chronicle* and *Lancashire Advertiser*, 21 February 1863, p. 4.

97*Preston Pilot* and *County Advertiser*, 21 February 1863, p. 2.

98Fawcett, Preston & Company, Engine Book, 1863.

99Gordon Watts, "Underwater Archaeological Reconnaissance and Historical Investigation of Shipwreck Sites in Lockwoods Folly Inlet," 1986.

100Certificate of British Registry, 16 July 1862, *Bendigo*, BT108-81, PRO.

101*Ibid.*

102U.S. Consular Dispatch, Liverpool, 17 and 25 July 1863, RG 84, NA and Customs Manifest, St. Georges, Bermuda, Inbound 1863, 19 August 1863, Bermuda Archives.

103Customs Manifest, St. Georges, Bermuda, *Bendigo*, Outbound 1863, 2 September 1863, Bermuda Archives.

104F. S. Wells to S. P. Lee, 13 January 1864, *ORN*, I, 9, pp. 400-401.

The *Agnes E. Fry* was designed and constructed as the *Fox* by Caird and Company in Greenock for the Burns mail and passenger service between Scotland and Ireland.[105] The vessel was one of a class of four steamers, including *Wolf, Roe* and *Lynx*, that were to maintain the Burns' service. *Fox*, second of the four, was launched on 26 March 1864.[106] While the vessel was being fitted out by Caird, it was sold in June to James Cameron a London merchant representing Crenshaw and Company and the name was changed to *Agnes E. Fry*.[107]

The *Agnes E. Fry* was built 236 feet 10 inches in length, 25 feet 2 inches in beam and had a 13 feet 6 inch depth of hold. The engine room measured 56 feet 11 inches in length and contained two oscillating steam cylinder engines each having 58 inch diameter and 69 inch stroke. The engines were fitted with Cairds expansion gear.[108] The *Agnes E. Fry* was designed and built of iron with an 9.4 to 1 length to beam ratios and 24% of the hull length and 33% of the tonnage was devoted to the steam machinery. Machinery consisted of two 275 horsepower direct acting steam cylinders also designed and produced by Caird and Company. Prior to her steam trials the "hansome fittings" and deck house installed to accommodate passengers on the run between Scotland and Ireland were stripped out to reduce the ships profile and increase cargo capacity.[109]

Although the accommodations of the *Agnes E. Fry* were removed to adapt the ship for blockade running, "a small Pilot House & wheel in platform or bridge" was left between the vessels two raked funnels. That structure enclosed the funnels and had an iron railing around the top. The funnels were fitted with pipes to blow off excess steam and there was no forecastle hood as the vessel's bow rode high out of the water. The figurehead of a fox was left in the ornamental molding on the stem.[110]

105*The Engineer*, 8 April 1864, p. 226.
106*Greenock Advertiser*, 29 March 1864.
107Certificate of British Registry, 27 July 1864, *Fox*, BT108-11, PRO and Certificate of British Registry, 2 August 1864, *Agnes E. Fry*, BT108-11, PRO and *Greenock Advertiser*, 23 June 1864.
108*Greenock Advertiser*, 29 March 1864.
109*Ibid.*, 23 June 1864 .
110U. S. Consular Dispatch, Glasgow, 30 July 1864, RG-84, NA.

On 29 July the *Agnes E. Fry* departed the Tail-of-the-Bank below Greenock for Nassau.[111] Instead of going to Nassau, Captain Joseph Fry took the steamer to Bermuda where they arrived on 29 August 1864.[112] Captain Fry took the *Agnes E. Fry* out almost immediately but was unable to run the blockade at Wilmington.[113] On 8 September, the *Agnes E. Fry* arrived in Nassau to take on coal.[114] On 22 September 1864, Captain Fry departed Nassau and again attempted to run the steamer through the blockade without success and returned to Bermuda. After taking on additional coal and waiting for the moon Captain Fry steamed out of St. Georges on 31 October.[115] This attempt to get into Wilmington proved successful and the *Agnes E. Fry* arrived at Smithville on the morning of 5 November.[116] On returning to Wilmington after carrying a cargo of cotton to Nassau in early December, the *Agnes E. Fry* was chased ashore on Long Island west of Fort Caswell and lost.[117]

Although quite different, *Phantom, Venus, Emily, Bendigo* and *Agnes E. Fry* represent vessels designed for a specific service but purchased while under construction or contract built for blockade running. In spite of the success of this third generation of vessels, their design criteria was not specific to the ever increasing demands of the trade. The *Phantom*, for example, proved to be a disappointment to Fraser, Trenholm and Company and was sold to the Confederate Government. *Emily* was incapable of sufficient speed to be effective in blockade running and was run ashore on the first voyage to Wilmington. The *Venus, Bendigo* and *Agnes E. Fry* were more successful. Their oscillating engine, shallow draft, flat bottom, low profile designs were characteristic of the purpose built blockade runners.

As the blockade and elements took their toll, the demand for fast steamers to run the blockade began to seriously deplete the supply of British vessels in the public transportation and mail services. On 23 April, the *Glasgow Advertiser* reported that because of the need for fast steamers to

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111*Greenock Advertiser*, 5 August 1864.

112Bermuda Customs, Outbound, St. Georges, *Agnes E. Fry*, 31 October 1864, BA.

113*New York Herald*, 8 September 1864.

114U. S. Consular Dispatch, Nassau, 24 September 1864, *ORN*, I, 10, p. 477 and *New York Herald*, 8 September 1864.

115*New York Herald*, 1 October 1864 and Bermuda Customs, Outbound, St. Georges, *Herald*, 31 October 1864, BA.

116Diary of Colonel William Lamb, 5 November 1864, College of William and Mary.

117W. H. C. Whiting to Flag-Officer Pinkney, 28 December 1864, *ORN*, I, 11, p. 787 and Braxton Bragg to Flag-Officer Pinkney, 29 December 1864, *ORN*, I, 11, p. 788.

On 29 July the *Agnes E. Fry* departed the Tail-of-the-Bank below Greenock for Nassau.[111] Instead of going to Nassau, Captain Joseph Fry took the steamer to Bermuda where they arrived on 29 August 1864.[112] Captain Fry took the *Agnes E. Fry* out almost immediately but was unable to run the blockade at Wilmington.[113] On 8 September, the *Agnes E. Fry* arrived in Nassau to take on coal.[114] On 22 September 1864, Captain Fry departed Nassau and again attempted to run the steamer through the blockade without success and returned to Bermuda. After taking on additional coal and waiting for the moon Captain Fry steamed out of St. Georges on 31 October.[115] This attempt to get into Wilmington proved successful and the *Agnes E. Fry* arrived at Smithville on the morning of 5 November.[116] On returning to Wilmington after carrying a cargo of cotton to Nassau in early December, the *Agnes E. Fry* was chased ashore on Long Island west of Fort Caswell and lost.[117]

Although quite different, *Phantom, Venus, Emily, Bendigo* and *Agnes E. Fry* represent vessels designed for a specific service but purchased while under construction or contract built for blockade running. In spite of the success of this third generation of vessels, their design criteria was not specific to the ever increasing demands of the trade. The *Phantom*, for example, proved to be a disappointment to Fraser, Trenholm and Company and was sold to the Confederate Government. *Emily* was incapable of sufficient speed to be effective in blockade running and was run ashore on the first voyage to Wilmington. The *Venus, Bendigo* and *Agnes E. Fry* were more successful. Their oscillating engine, shallow draft, flat bottom, low profile designs were characteristic of the purpose built blockade runners.

As the blockade and elements took their toll, the demand for fast steamers to run the blockade began to seriously deplete the supply of British vessels in the public transportation and mail services. On 23 April, the *Glasgow Advertiser* reported that because of the need for fast steamers to

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111*Greenock Advertiser*, 5 August 1864.
112Bermuda Customs, Outbound, St. Georges, *Agnes E. Fry*, 31 October 1864, BA.
113*New York Herald*, 8 September 1864.
114U. S. Consular Dispatch, Nassau, 24 September 1864, *ORN*, I, 10, p. 477 and *New York Herald*, 8 September 1864.
115*New York Herald*, 1 October 1864 and Bermuda Customs, Outbound, St. Georges, *Herald*, 31 October 1864, BA.
116Diary of Colonel William Lamb, 5 November 1864, College of William and Mary.
117W. H. C. Whiting to Flag-Officer Pinkney, 28 December 1864, *ORN*, I, 11, p. 787 and Braxton Bragg to Flag-Officer Pinkney, 29 December 1864, *ORN*, I, 11, p. 788.

support blockade running: "there will scarce be a fast steamer left on the Clyde."[118] In his 8 May 1863, dispatch to Secretary of State William H. Seward, U. S. Consul at London Freeman H. Morse reported that:

> Nearly all the steamers fit for Confederate use and ready for service either for privateers, carrying cargo to the Mexican coast, or for running the blockade have been bought up sometimes to the serious inconvenience of the coast & continental trade. Very high prices have been paid for those lately purchased, some times about double their cost after running two or three years. Of course with such a demand for steamer navigation every building yard is fully occupied & there is a scarcity of workmen at high wages for this country. New boats are got into the water every few days & I hear from the Clyde that the Confederate agents are still actively inquiring for further purchases.[119]

Because successful blockade running required specific design criteria and more speed, vessels began to be designed and built for the specific purpose of breaking the blockade. Those vessels combined the most appropriate available technology with hull design criteria specific to both the demands of the trade and the Atlantic coastal environment off southeastern North America. The first vessel specifically designed and built to run the blockade included many of the technological advances that were considered to be advantageous.

Shipbuilders on the Mersey, Clyde and Thames quickly developed designs for long, low freeboard vessels with sufficient power and speed to meet the needs of the Anglo-Confederate trade. Although not the only prerequisite for running the blockade, speed was recognized as a major consideration by 1863. Contracts for purpose built blockade runners often included a guaranteed speed. Reports on trials of the machinery inevitably included "running the lights" or a test of the vessel's speed over a measured course. As the blockade tightened, the demand for speed increased. The following table provides an indication of the constant increase in speed associated with ships built to run the blockade.

118*Glasgow Advertiser*, 23 April 1863.

119U. S. Consular Dispatch, London, 8 May 1863, RG 84, NA.

Vessel	Launch Date	Speed
	1862	
Coquette	May	16 knots[120]
Flora	November	14.5 knots[121]
	1863	
Banshee	January	16 knots[122]
Kate	February	12 knots[123]
Columbia	March	15 knots[124]
Hebe	April	14.45 mph[125]
Anglia	April	14 knots[126]
Southerner	June	12.5 knots[127]
Aurora	August	14.5 knots[128]
Lucy	October	19 knots[129]
Gibraltar	October	10.8 knots[130]
Will o' the Wisp	November	18 mph[131]
Nola	November	16 knots[132]
Fergus	November	20.5 mph[133]
Greyhound	December	14.5 mph[134]
Iona II	December	21 knots[135]
	1864	
Greyhound	February	15.5 knots[136]
Edith	February	13.5 knots[137]
Badger	March	16 knots[138]

120*The Artizan*, 1 June 1863, p. 142 and *The Engineer*, 18 December 1863.
121*The Artizan*, 1 December 1862, p. 286 and *The Engineer*, 14 November 1862, p. 293.
122*The Artizan*, 1 February 1863, p. 190.
123*The Artizan*, 1 April 1863, p. 92.
124*The Artizan*, 1 April 1863, p. 93.
125*The Artizan*, 1 May 1863, p. 115.
126*The Artizan*, 1 May 1863, p. 114.
127*The Artizan*, 1 July 1863, p. 165.
128*The Artizan*, 1 September 1863, p. 212.
129*The Engineer*, 16 October 1863, p. 236.
130*The Artizan*, 1 November 1863, p. 258.
131*The Engineer*, 20 November 1863, p. 306.
132*Ibid.*
133*The Engineer*, 4 September 1863, p. 150.
134*The Engineer*, 18 December 1863.
135*The Engineer*, 3 July 1863, p. 14.
136*The Engineer*, 1 January 1864, p. 14.
137*The Engineer*, 4 March 1864, p. 141.
138*The Engineer*, 25 March 1864, p. 194.

Atalanta	March	14.138 knots[139]
Little Hattie	May	19 mph[140]
Hope	June	16.5 knots[141]
Owl	June	16 knots[142]
Colonel Lamb	September	19 mph[143]
Georgia Bell		14 knots[144]
Lelia		18 mph[145]
1865		
Louise Ann Fanny	January	17 3/4 knots[146]

The *Hebe, Ranger, Vesta, Wild Dayrell, Dee, Ella,* and *Stormy Petrel* were all vessels specifically designed around those criteria and purpose built to run the blockade.

The first vessel designed and built as a blockade runner was the paddle steamer *Banshee* constructed in 1862 by Jones, Quiggin and Company of Liverpool. *Banshee* had been ordered by John T. Lawrence of the Anglo-Confederate Trading Company.[147] The vessel was unique in that it was constructed of steel and combined most of the technological advances in vessel design, construction and steam engineering that had been adopted for vessels successfully engaged in the trade. Although part of the vessel's scantlings were of iron, the majority of the hull was of steel produced by the Mersey Steel and Iron Works.[148] The vessel was 214 feet in length 20 feet in beam and had a 10 foot depth of hold.[149] Those measurements gave the *Banshee* a 10.7 to 1 length to beam ratio. Steam machinery occupied 27% of the hull length and 36% of the tonnage.

139*The Artizan*, 1 April 1864, p. 92.
140*The Artizan*, 1 December 1864, p. 285.
141*The Engineer*, 10 June 1864, p. 364.
142*The Engineer*, 15 July 1864, p. 48.
143*The Artizan*, 1 October 1864, p. 237.
144*The Artizan*, 1 January 1865, p. 21.
145*The Artizan*, 1 February 1865, p.44.
146*Ibid.*
147*The Artizan*, "A Merchant Steel Ship," 1 January 1863, p. 19 and U. S. Consular Dispatch, Liverpool, 6 January 1863, RG 84, NA.
148*The Artizan*, "A Merchant Steel Ship," 1 January 1863, p. 19.
149Certificate of British Registry, 10 August 1864, *Banshee*, BT108-243, PRO.

Banshee was fitted with four watertight bulkheads, and the engines consisted of two 52 inch diameter, 48 inch stroke oscillating steam cylinders that produced 120 horsepower. The vessel's return fire tube box boilers were vented through retractable smoke pipes. The hull was a low freeboard design with moderate size paddle wheels. Patented feathering floats were employed to increase efficiency and reduce noise. Short pole masts were used to reduce the vessel's profile. *Banshee*'s bow was fitted with a forecastle hood and the only deck structure was a bridge between the two paddle boxes. At Nassau the hull was painted white to make the ship more difficult to see at night and in "thick" weather.[150]

The *Banshee* was too lightly plated and some of the hull plates buckled during the Atlantic crossing, nonetheless, the vessel was highly successful and the model was adopted by other firms and builders. The most unusual aspect of the *Banshee* was the fact that the hull was built almost entirely of steel. That vessel has been credited with being the first steel vessel to cross the Atlantic. However, a river steamer built by Richardson, Duck and Company of South Stockton preceded the *Banshee*'s Atlantic crossing by three and a half years. That vessel, the *Little Lucy*, was 70 feet in length, 12 feet in beam and had a depth of hold of 6 feet 6 inches and was built of "Mersey Puddled Steel" plate.[151]

The first of the purpose built-blockade runners lost on the North Carolina coast was the steamer *Ranger* run ashore on Holdens Beach west of Lockwoods Folly Inlet on 11 January 1864. *Ranger* was built by Palmer's Shipbuilding Company in Jarrow-on-Tyne. The steamer was 232 feet 7 inches in length, 25 feet 3 inches in beam and had a 10 foot 8 inch depth of hold. The hull of the *Ranger* was flat in the floor with very minimal deadrise and the bilges were tightly rounded.[152] The engine room measured 47 feet 5 inches in length.[153] Those dimensions gave the *Ranger* a 9.3 to 1 length to beam ratio. Two oscillating cylinder engines provided the vessel with one hundred fifty horsepower. Feathering floats were used on the paddle wheels to increase efficiency and reduce noise. Steam machinery occupied 20% of the hull length and 26% of the tonnage.

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[150]Wise, *Lifeline*, pp. 112-113 and 289-290.

[151]Stockton and Hartlepool *Mercury*, 3 September 1859.

[152]Notes on reconnaissance survey of *Ranger* in the collection of G. P. Watts, 1984.

[153]Certificate of British Registry, 6 November 1863, *Ranger*, BT108-81, PRO.

The *Ranger* was launched on 12 October 1863 and was registered in Jarrow on 6 November 1863. The owner was listed as James H. Wilson, a Liverpool merchant.[154] Rather than going to Liverpool, *Ranger* was taken to Plymouth by Captain John Thomas Holmes. There the vessel took on coal and departed for Bermuda in ballast.[155] Under Captain Holmes' command *Ranger* made the Atlantic crossing to Bermuda in less than a month arriving at St. Georges around 5 December 1863.[156] At St. Georges, the vessel was painted a light lead color, and loaded with cargo on account of the Confederate Government. After clearing Bermuda Customs at St. Georges the vessel departed for Nassau on 17 December.

By 24 December, *Ranger* was back in Bermuda having run almost into Wilmington before having trouble with the steam machinery.[157] After making the necessary repairs and taking on coal the *Ranger* departed for Wilmington during the first week of January 1864 under the command of Lieutenant George Gift, CSN.[158] After approaching the coast near Cape Fear on 9 January, Gift tried to establish his position using the Frying Pan Shoals lightship. When he found that the light had been extinguished, Gift headed the *Ranger* inshore and anchored east of Little River during the day on 10 January. After establishing his position and putting passengers ashore, Gift headed east along the beach toward Old Inlet a half hour after midnight. Eight miles west of Old Inlet the crew of the *Ranger* found the USS *Minnesota* in their path. The pilot panicked and ran the steamer ashore in the breakers approximately one mile west of Lockwoods Folly Inlet. According to Gift's official explanation "a couple of turns of a wheel in the hands of a timid man lost a fine ship and a valuable cargo."[159]

154*Ibid.*, and [The History of] *Palmers Shipbuilding and Iron Company, Limited*, Jarrow and Hebburn, England, 1924 published for the British Empire Exhibition 1924.

155Bermuda Customs Manifest, In-bound St. Georges, *Ranger*, nd after 5 December 1863, BA.

156*Ibid.*

157Bermuda Customs Manifest, Out-bound St. Georges, nd after 5 December 1863, *Ranger*, BA; John T. Bourne to M. G. Klingender, 24 December 1863 and John T. Bourne to S. I. Campbell, 24 December 1863, Bourne Letter Book, 1863-1865, BA.

158George Gift to Ellen A. Shackleford , 27 January 1864, Gift Papers, Southern Historical Collection, University of North Carolina.

159George Gift, 27 January 1864, Sprunt, *Derelicts*, pp. 97-102.

The *Wild Dayrell,* lost in Rich Inlet, represents another paddle wheel steamer designed and built to run the blockade. That vessel was built by the firm of Jones, Quiggin and Company in Liverpool and was an identical sistership of the *Lucy*. Both the *Wild Dayrell* and the *Lucy* were modeled after *Banshee* but were constructed of iron.

Wild Dayrell was built 215 feet in length, 20 feet in beam and had a 10 foot 3 inch depth of hold. The engine room measured 50 feet 8 inches in length.[160] Those dimensions gave the *Wild Dayrell* a 10.7 to 1 length to beam ratio. Steam machinery occupied 24% of the hull length and 35% of the tonnage. Two oscillating cylinder engines provided the vessel with one hundred forty horsepower. Oscillating steam cylinder engines in the vessel were built by Fawcett, Preston and Company in Liverpool and measured 52 inches in diameter and had a stroke of 48 inches.[161] The *Wild Dayrell* was also equipped with feathering paddle wheel floats and a forecastle hood. Two raked pole masts and two raked retractable funnels were all that protruded above the level of the steamer's paddle boxes.

The *Wild Dayrell* was launched on 17 September 1863.[162] Although the steam trials of the *Wild Dayrell* were not reported in the press, the steel plated sistership *Lucy* proved to be capable of 15 1/2 knots against a strong wind and tide during her trials in October 1863.[163] By 12 November the vessel's registered owners Edward Lawrence and Company had entered the vessel at Liverpool Customs to load for Nassau. Once loaded, the *Wild Dayrell* cleared for sea on 14 November.[164] In December the steamer made Nassau and, after being painted a lead color, took on a cargo for Wilmington. After two successful round trips the *Wild Dayrell* was run ashore approximately twenty miles north of Fort Fisher on 1 February 1864.[165]

One of the most distinctive of the paddle wheel steamers designed and built to run the blockade was the *Condor*. The *Condor* was one of a class of four identical vessels, that included the *Falcon, Flamingo* and *Ptarmigan,* built by Randolph, Elder and Company at their new yard at Govan on the Clyde

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[160]Certificate of British Registry, 6 November 1863, *Ranger,* BT108-81, PRO.
[161]Fawcett, Preston and Company, Engine Book, 1863 and Specifications of Iron Paddle Steamers, "*Lucy*" & "*Wild Dayrell,*" Jones, Quiggin and Company, Maritime Museum, Liverpool.
[162]U. S. Consular Dispatch, Liverpool, 18 September 1863, RG 84, NA.
[163]*Liverpool Daily Post,* 13 October 1863.
[164]U. S. Consular Dispatch, Liverpool, 13 November 1863, RG 84, NA.
[165]F. A. Roe to S. P. Lee, 3 February 1864, *ORN,* I, 9, pp. 438-439.

River.[166] The steamers were built for Alexander Collie and Company. The *Condor* and others of the class were 221 feet in length, 28 feet 3 inches in beam and had a 9 foot 10 inch depth of hold. The engine room measured 59 feet 7 inches in length.[167] Those dimensions gave the *Condor* a 7.9 to 1 length to beam ratio. Steam machinery occupied 27% of the hull length and 36% of the tonnage. The vessel's oscillating steam cylinder engines were also built by Randolph, Elder and Company and measured 52 inches in diameter, had a stroke of 48 inches and produced 180 horsepower. The boilers were a vertical fire tube design identified as "Haystack Boilers" because of their similarity to a hay stack in shape. Two boilers supplied steam during normal operations and the third was fired up when maximum speed was necessary.[168]

Falcon, the first of the four to be completed, was launched on 15 June 1864.[169] Reports from M. S. Underwood, the U. S. Consul in Glasgow, indicated that *Falcon* and the other vessels of that class were "built for speed to the sacrifice of almost every other consideration."[170] Although their speed was calculated to be "24 statute miles per hour" the *Falcon* only achieved 21 1/2 statute miles per hour during trials of the machinery.[171]

The *Condor* and her sisterships were distinctive in appearance because they were fitted with three boilers and had three raked funnels forward of the paddle wheels. None of the funnels were fitted with pipes to blow off excess steam as the noise associated with that operation attracted undesirable attention in the proximity of the blockade. Instead the vessels were equipped to blow off excess steam underwater.[172] Each vessel in the class was also equipped with feathering floats and a forecastle hood.

The shallow depth of hold of the *Falcon* class vessels made it necessary to construct a small engine house and boiler hoods on the deck. Accommodations for the vessel's officers were located in an enclosed poop and those of the crew were forward below a covered forecastle or "turtle back."[173] The "turtle back" or "hooded forecastle" was designed to throw water off the

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166Clyde Built Ship Card File, Mitchell Library, Glasgow.
167Certificate of British Registry, 8 August 1864, *Condor,* BT108-243, PRO.
168U. S. Consular Dispatch, Glasgow, 8 July 1864, RG 84, NA.
169Clyde Built Ship Card File, Mitchell Library, Glasgow.
170U. S. Consular Dispatch, Glasgow, 18 June 1864, RG 84, NA.
171 U. S. Consular Dispatch, Glasgow, 27 May and 18 June 1864, RG 84, NA.
172 U. S. Consular Dispatch, Glasgow, 27 May 1864, RG 84, NA.
173 U. S. Consular Dispatch, Glasgow, 27 May 1864 and 8 July 1864, RG 84, NA.

forward deck and help the bow punch through seas in rough weather. *Condor* also had two short pole masts to carry fore and aft sails for stability, facilitate cargo handling, and provide stations for lookouts.[174] A low deck house enclosed the funnels to protect the boilers and extended aft of the paddle wheels to the main mast to provide passenger accommodations.[175]

On 10 August 1864, the *Condor* departed Glasgow with a cargo of military supplies and extra coal.[176] From Glasgow the *Condor* steamed to Cork, Ireland. There unidentified Confederate agents took the train to Limerick where a supply of military uniforms had been procured for shipment aboard the steamer.[177] From Ireland the *Condor* steamed to Bermuda arriving on 1 September 1864.[178] From Bermuda the *Condor* went to Halifax, Nova Scotia for coal and additional cargo. On 24 September, when the dark of the moon made it safe to attempt to run the blockade the vessel departed for Wilmington under the command of Captain William N. W. Hewett formally commander of the British warship *Rinaldo*.[179] On the morning of 1 October 1864, the *Condor* was driven ashore on Caroline Shoals at the entrance to New Inlet by the USS *Niphon*.[180]

The steamer *Ella* was one of two identical vessels constructed by William Denny and Sons at Dumbarton.[181] The ship was built for the Importing and Exporting Company of South Carolina but, the registered owner was James Carlin of Carrickfergus. The *Ella,* and the other vessel of the class *Annie,* were each built 226 feet 1 inch in length, 28 feet 3 inches in beam and had a 13 foot 6 inch depth of hold (Figure 24). The engine room measured 64 feet 3 inches in length.[182] Those dimensions gave the *Ella* an 8 to 1 length to beam ratio. Steam machinery occupied 28% of the hull length and 36% of the tonnage. The vessel's oscillating steam cylinder engines were built by Robert Napier and Sons at the Lancefield Foundry in Glasgow and measured 42 inches in

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174 U. S. Consular Dispatch, Glasgow, 8 July 1864, RG 84, NA.

175 *Flamingo* Painting, Spurling Collection, St. Georges Historical Society, St. Georges, Bermuda.

176 *Glasgow Herald*, 11 August 1864.

177 *Glasgow Herald*, 18 August 1864 and U. S. Consular Dispatch, Cork, ND (Received, 7 September 1864) RG 84, NA.

178 Bermuda Customs, Inbound, St. Georges, *Condor*, 1 September 1864.

179 U. S. Consular Dispatch, Halifax, 7, 18, 21 and 26 September, 1864, *ORN*, I, 10, pp. 438, 468, 476 and 484.

180 S. P. Lee to G. Welles, 7 October 1864, *ORN*, I, 10, p. 531.

181 *The Artizan*, "Steam Shipping" 1 July 1864, p. 165.

182 Certificate of British Registry, 11 July 1864, *Ella*, BT108-243 PRO.

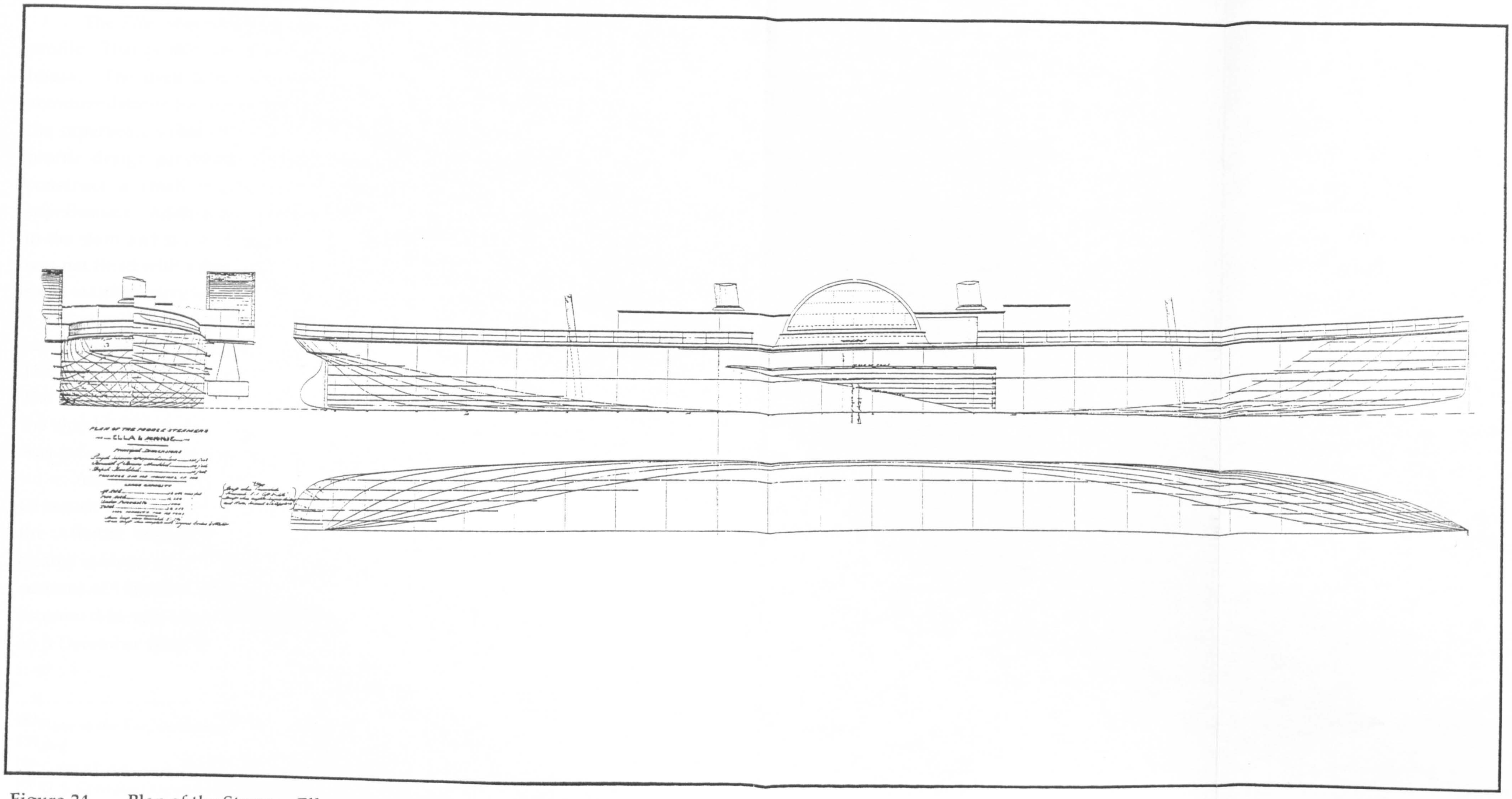

Figure 24. Plan of the Steamer *Ella*.

diameter, had a stroke of 60 inches and produced 200 horsepower. The boilers were a horizontal fire tube design equipped with superheaters to improve efficiency. The paddle wheels of the *Ella* were fitted with feathering floats to improve efficiency and speed.[183]

The *Ella* was designed with a long low hull to reduce the ships visible profile. That profile was only interrupted by the paddle boxes and a low deck house. The deck house arrangement included a pilot house forward and accommodations for some the officers and passengers that were built around the superheaters that extended well above the level of the deck. The *Ella*'s low profile design produced a limited depth of hold that made it necessary to construct a small engine hatch and boiler house on the deck for the superheaters. Additional accommodations for the vessel's officers were located in the stern and those of the crew were forward in the forecastle. The steamer was not fitted with a forecastle hood or turtle back. *Ella* was equipped with two short masts to carry fore and aft sails for stability and a yard on the foremast for a square sail to enhance speed when conditions permitted. *Ella's* masts were also equipped to facilitate cargo handling, and provide stations for lookouts. The hull was virtually flat amidships with no deadrise and no external keel. The absence of a keel was intended to make the vessel easier to work off should the ship be intentionally or inadvertently run aground. The forefoot of the *Ella* was cut away to reduce the impact of grounding.[184]

Already painted white, the *Ella* completed her trials and departed from Greenock on 16 July.[185] On 17 July the steamer was at Cork taking on coal for the Atlantic voyage.[186] From Cork the *Ella* sailed directly to Bermuda and cleared customs at St. Georges on 2 August 1864.[187] One week later, *Ella* cleared customs at Hamilton and sailed for Wilmington on 9 August 1864.[188] The *Ella* continued to run into Wilmington until being driven ashore off Smith Island on 3 December 1864.[189]

183Plans of the *Ella*, Denny Collection, NMM, Greenwich.
184*Ibid.*
185 *Greenock Advertiser*, 27 December 1864 and *Glasgow Herald*, 19 July 1864.
186 U. S. Consular Dispatch, Cork, 25 July 1864, RG 84, NA.
187Bermuda Customs, St. Georges, In-bound, *Ella*, 2 August 1864, BA.
188 Bermuda Customs, Hamilton, Out-bound, 9 August 1864, *Ella*, BA.
189G. W. Young to D. D. Porter, 6 December 1864, *ORN*, I, 11, p. 131 and I. S. Sampson to T. C. Dunn, 6 December 1864, *ORN*, I, 11, pp. 132-133.

Stormy Petrel was another purpose built blockade runner from Glasgow that was chased ashore on the outer extremity of Caroline Shoals off New Inlet. That vessel was built by the firm of William Simons and Company at their London Works in Renfrew. The ship was built for the Anglo-Confederate Trading Company but, the registered owner was John Lawrence of Liverpool. The *Stormy Petrel,* and another vessel of the class *Mary Bowers,* were each built 222 feet 5 inches in length, 25 feet 2 inches in beam and had a 10 foot 3 inch depth of hold. The engine room measured 49 feet 8 inches in length.[190] Those dimensions gave the *Stormy Petrel,* an 8.8 to 1 length to beam ratio. Steam machinery occupied 22% of the hull length and 36% of the tonnage. The vessel's oscillating steam cylinder engines were also built by William Simons and Company and produced 180 horsepower.[191] The boilers were a cylindrical horizontal fire tube design equipped with superheaters to improve efficiency. The paddle wheels of the *Stormy Petrel* were fitted with feathering floats to improve efficiency and speed.[192]

Like most of the vessels built to run the blockade, the *Stormy Petrel* was designed with a long low profile that produced a limited depth of hold (Figure 25). That profile was only interrupted by the paddle boxes and a bridge between them and two small deck houses. The shallow depth of hold of the *Stormy Petrel* made it necessary to construct a small engine hatch and boiler house on the deck for the superheaters. Accommodations for the vessel's officers were located in the stern and those of the crew were forward below a forecastle hood or turtle back. *Stormy Petrel* also had two shore masts to carry fore and aft sails for stability, facilitate cargo handling, and provide stations for lookouts. The hull was almost flat amidships with only marginal deadrise and no exterior keel to complicate grounding. The forefoot of the *Stormy Petrel* was also cut away to reduce the impact of grounding.[193]

The *Stormy Petrel* was launched on 29 July 1864 and the engines were immediately installed at the William Simons and Company yard.[194] On 11 August, the steamer underwent trials of the steam machinery near the Tail-of-

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190Certificate of British Registry, 11 July 1864, *Ella,* BT108-243 PRO.
191 *The Engineer,* 12 August 1864, p. 112., and *Liverpool Journal of Commerce,* 8 August 1864.
192Profile and Plans of the *Stormy Petrel,* University of Glasgow Archive, Glasgow.
193 *Ibid.*
194 U. S. Consular Dispatch, Glasgow, 30 July 1864, RG 84, NA.

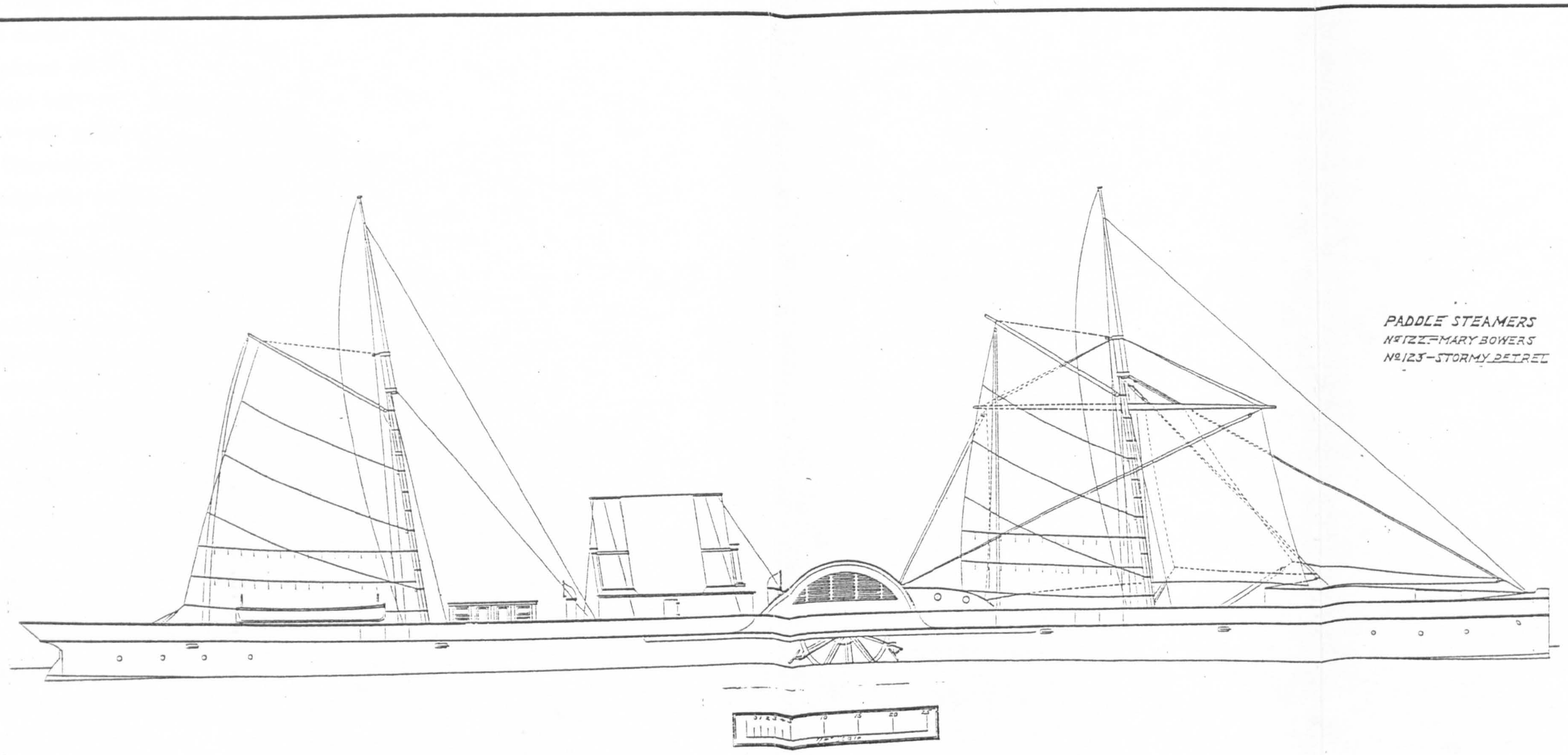

Figure 25. Plan of the Steamer *Stormy Petrel*.

the-Bank on the Clyde below Greenock.[195] By the third week of September the *Stormy Petrel* had completed the voyage to Bermuda and on 24 September, the ship cleared customs in Hamilton and headed for Wilmington.[196] On the second attempt to break the blockade the steamer's boiler exploded and the vessel was forced back into St. Georges on 2 November 1864.[197] After repairs were completed the *Stormy Petrel* cleared St. Georges and ran for Wilmington a second time but was unable to break the blockade and headed for Nassau.[198] There the vessel took on additional coal and departed for Wilmington a third time on 3 December. On the morning of 7 December, the ship ran aground on the outer edge of Caroline Shoals off New Inlet and was destroyed.[199]

Although paddle wheel steamers were the most prevalent design for vessels specifically built for running the blockade, a limited number of twin screw steamers were also produced and put into service. The twin screw concept had been in use in the United States for almost two decades and was patented in England almost a decade prior to *Flora* by Richard Roberts. However, the idea was not effectively put into practice in iron vessels until the Dudgeons construction of a twin screw vessel in 1857.[200]

The first of the Dudgeon blockade runners was the *Flora* produced by John and William Dudgeon, owners of the Sun Iron Works in London for Alexander Collie and Company. *Flora* was 161 feet four inches in length, 22 feet 6 inches in beam and had a depth of hold of 12 feet 5 inches. A two cylinder steam engine, each 26 inches in diameter with a 21 inch stroke, was fitted to drive each shaft. The engine room measured 41 feet 5 inches in length.[201] Those dimensions gave the *Flora* an 7.1 to 1 length to beam ratio. Steam machinery occupied 26% of the hull length and 38% of the tonnage. At the time the vessel's trials press observers recorded a draft of 5 feet 5 inches forward and 7 feet aft.[202]

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195 *Greenock Advertiser*, 11 August 1864.

196 Bermuda Customs, Hamilton Outbound, 1864, *Stormy Petrel*, BA.

197 Consular Dispatch, Bermuda, 24 October 1864 , Consular Dispatch, Nassau, 1 November 1864 and Bermuda Customs, St. Georges In-bound, 2 November 1864, *Stormy Petrel*, BA.

198 *Greenock Advertiser*, 21 and 29 November and 10 December 1864.

199 Diary of Colonel William Lamb, 7 December 1864, College of William and Mary.

200 *Transactions of the Institution of Naval Architects*, Richard Roberts Obituary, Vol. 4, 1864, p. xxvi.

201 Certificate of British Registry, 22 November 1862, *Flora*, BT 108/09, PRO and *London Times*, ND, included in U. S. Consular Dispatch, London, 10 April 1863.

202 *The Artizan*, 1 December 1862, p. 286.

The vessel's horizontal direct acting double cylinder engines were also built by Sun Iron Works and produced 120 horsepower.[203] The boilers were a horizontal fire tube design positioned athwart ship and equipped with a common flue. The three blade propellers were 7 feet in diameter and had 14 feet 6 inches of pitch to improve efficiency and speed.[204]

Flora was highly successful although the steamers speed was only 14 knots.[205] After nine months of running between Nassau and Charleston or Wilmington for Alexander Collie and Company the ship was sold to the Consolidated Steamship Company and the next month to the Confederate Government for use as a transport on the Cape Fear.[206] The *Flora* was operated on the Cape Fear until being scuttled on 16 January 1865.[207]

A second Dudgeon double screw, *Kate*, was constructed for Edward J. Lomnitz a Manchester merchant representing Beech and Root and Company.[208] *Kate* was 176 feet 8 inches in length, 22 feet 6 inches in beam and had a depth of hold of 12 feet 4 inches. The engine room measured 39 feet 3 inches in length.[209] Those dimensions gave the *Kate*, an 8 to 1 length to beam ratio. Steam machinery occupied 22% of the hull length and 24% of the tonnage and produced a draft of 5 feet 4 inches forward and 7 feet 2 inches aft at the time the vessel's trials.[210] The vessel's horizontal direct acting double cylinder engines were also built by Sun Iron Works and produced 120 horsepower. Each cylinder was 21 inches in diameter and pistons operated on a 26 inch stroke. The boilers were a horizontal fire tube design positioned athwartships and equipped with a common flue. The three blade propellers were 7 feet 6 inches in diameter and had 14 feet 6 inches of pitch to improve efficiency and speed.[211]

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203 *The Artizan*, 1 May 1862 and 1 December 1862 and *The Engineer*, 14 November 1862, p. 293.

204 *The Artizan*, 1 December 1862 and *The Engineer*, 14 November 1862, p. 293.

205 *The Artizan*, 1 December 1862, London and *The Engineer*, 14 November 1862, p. 293.

206 Wise, *Lifeline*, pp. 299-300.

207 Wise, *Lifeline*, pp. 299-300.

208 Wise, *Lifeline*, p. 307.

209 Certificate of British Registry, 31 March 1863, *Kate*, BT 108/10, PRO.

210 *The Engineer*, 6 March 1863, p. 139.

211 *Illustrated London News*, "Dudgeon's New Double-screw Steam-ship *Flora*" 29 November 1862, p. 587 and *The Artizan*, 1 April 1863, pp. 92-93 and *The Engineer*, 6 March 1863, p. 139. Dimension of the *Kate*'s machinery were reported as having 26 inch cylinders and 26 inches of stroke and those of the *Hebe* were reported as having 26 inch cylinders and 26 inches of stroke.

Kate, even more than *Flora,* attracted considerable attention during her machinery trials. The majority of that attention was directed to the function of the twin-screw system of propulsion. In addition to recording a 12 knot speed under both screws and boilers, the vessel was capable of 8 knots under one screw and boiler. A major preoccupation was the maneuverability of the ship and most of the trials involved testing the steerage and turning the vessel with the screws. All of the tests proved quite satisfactory and the much improved control over the vessel provided by the twin screw arrangement was not lost on the owners or a special agent of the Admiralty.[212] *Kate* was also impressive because of the speed attained from a modest power to displacement ratio of .25 horsepower to a ton of displacement.[213]

The double screw vessels built by the Dudgeon brothers were also distinctive because of their hull configuration. Contemporary descriptions of the *Kate* reveal that the vessel was "perfectly flat in her floor at the amidships section, and without keel" and had "tolerably square bilges".[214] Two masts were designed for small fore and aft schooner rigs and were "constructed to lower by a joint near the deck" and telescopic funnels were also designed to be lowered to reduce the *Kate*'s visible profile.[215]

Unlike *Flora, Kate* proved to be less successful as a blockader runner. After clearing London Customs in late March, the steamer ran out to Nassau.[216] After several successful trips through the blockade at Charleston and Wilmington, *Kate* was chased aground on the east side of Smith Island on 12 July 1863.[217] In spite of Union efforts to destroy the stranded steamer, Confederate salvors refloated the vessel and were in the process of towing the hull to New Inlet when they were discovered and the was vessel captured by the USS *Iroquois, Mount Vernon,* and *James Adger.*[218]

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212 *The Artizan,* 1 April 1863, pp. 92-93 and *The Engineer,* 6 March 1863, p. 139.
213 *London Times,* ND, included in Consular Dispatch, London, 10 April 1863.
214 *London Times,* ND, included in Consular Dispatch, London, 10 April 1863 and *The Artizan,* 1 April 1863, pp. 92-93 .
215 *London Times,* ND, included in Consular Dispatch, London, 10 April 1863 and *The Artizan,* 1 April 1863, pp. 92-93 .
216 U. S. Consular Dispatch, London, 27 March 1863.
217 A. L. Case to S. P. Lee, 13 July 1863, *ORN,* I, 9, pp. 120-121.
218 S. P. Lee to G. Welles, 6 August 1863, *ORN,* I, 9, p. 142.

The first of the new twin screw steamers to be lost on the North Carolina coast was the *Hebe*. That Dudgeon double screw was constructed for Collie, Crenshaw and Company. Like *Kate*, *Hebe*, was 176 feet 8 inches in length, 22 feet 6 inches in beam and had a depth of hold of 12 feet 4 inches. The engine room measured 39 feet 3 inches in length.[219] Those dimensions gave the *Hebe*, an 8 to 1 length to beam ratio. Steam machinery occupied 22% of the hull length and 24% of the tonnage and produced a draft of 5 feet forward and 9 feet aft at the time the vessel's trials.[220]

The vessel's horizontal direct acting double cylinder engines were also built by the Dudgeons and produced 120 horsepower. Each cylinder was 21 inches in diameter with a 26 inch stroke was fitted to drive each shaft.[221] The boilers were a horizontal fire tube design positioned athwartships and equipped with a common flue. The three-blade propellers were 7 feet 6 inches in diameter and had 15 feet of pitch.[222]

Trial of the *Hebe* attracted even more attention than the *Flora* and *Kate*. Aboard during the tests were a variety of scientific and government representatives and "gentlemen connected with the commercial marine." Those in attendance included; Sir J. D. Elphinstone, M. P., Admiral Sir Edward Belcher, C. B., Sir J. Lawrence, Captains Jones and Howes and Commander T. E. Symonds of the Royal Navy, and several officers in the service of Imperial Austria. The majority of their attention was directed to the twin-screw system of propulsion, and most of trials involved testing the maneuverability of the ship using the screws. As was previously the case, all of the tests proved quite satisfactory.[223] *Hebe* attained a 12 knot speed under both screws and boilers with the same modest power to displacement ratio as the *Kate*. [224]

Like the previous double screw vessels built by the Dudgeon brothers, *Hebe* also had a distinctive hull configuration. Like the *Kate*, *Hebe* was "perfectly flat in her floor at the amidships section, and without keel" and had

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219 Certificate of British Registry, 7 May 1863, *Hebe*, BT 108/10, PRO.
220 *The Engineer*, 1 May 1863, p. 252.
221 *London Times*, ND, included in Consular Dispatch, London, 10 April 1863 and *The Artizan*, 1 May 1863, p. 115.
222 *The Engineer*, 1 May 1863, p. 252.
223 *Ibid.*, and *The Artizan*, 1 May 1863, p. 115.
224 *The Engineer*, 1 May 1863, p. 252 and *The Artizan*, 1 May 1863, p. 115.

"tolerably square bilges".[225] Two pole masts were designed for small fore and aft schooner rigs and were "constructed to lower by a joint near the deck" and the vessel's telescopic funnel was also designed to be retracted to reduce the ship's visible profile.[226] A low deckhouse extended aft from the foremast to the stern just forward of the ships wheel and enclosed the funnel. *Hebe*'s bow was designed along the lines of a clipper with a bowsprit and decorated trailboards.[227]

As a blockader runner the *Hebe* had only limited success. After clearing London Customs on 13 May, the steamer ran out to Nassau.[228] There the steamer waited for the dark of the moon and ran into Wilmington on 10 July 1863.[229] After successfully running back out through the blockade *Hebe* delivered a cargo of cotton and headed back to Wilmington in mid-August. On 18 August, *Hebe* was discovered and chased aground north of Fort Fisher by the USS *Niphon* and USS *Shokokon*.[230]

Early in 1864, another Dudgeon twin-screw vessel was lost on the North Carolina coast not far from the wreck of the *Hebe*. That vessel was the *Dee*. *Dee* was built as the *Aurora* for Collie, Crenshaw and Company. That name was changed to *Dee* before the ship was delivered to her owners in August 1863. *Dee* was 175 feet 5 inches in length, 23 feet 6 inches in beam and had a depth of hold of 12 feet 5 inches. The engine room measured 37 feet 8 inches in length.[231] Those dimensions gave the *Dee*, a 7.6 to 1 length to beam ratio. Steam machinery occupied 21% of the hull length and 33% of the tonnage and produced a draft of 5 feet 3 inches forward and 7 feet 3 inches aft at the time the vessel's trials.[232] Slight differences in the specifications and capacities of the *Dee* were a result of refinements to the hull which produced "much finer lines fore and aft than were possessed by either predecessors."[233]

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225 *London Times*, ND, included in Consular Dispatch, London, 10 April 1863 and *The Artizan*, 1 April 1863, pp. 92-93.
226 U. S. Consular Dispatch, London, 24 April 1863, 8 May 1863 and 13 May 1863, RG-84, NA.
227 U. S. Consular Dispatch, London, 13 May 1863, RG-84, NA.
228 *Ibid.*
229 Wise, *Lifeline*, p. 234.
230 N. B. Harrison to S. P. Lee, 18 August 1863, *ORN*, I, 9, p. 158.
231 Certificate of British Registry, 2 September 1863, *Dee*, BT 108/10, PRO and Consular Dispatch, London, 4 September 1863.
232 *Army and Navy Gazette*, 29 August 1863 and *The Artizan*, 1 September 1863.
233 *Army and Navy Gazette*, 29 August 1863.

The vessel's horizontal direct acting double cylinder engines were also built by the Dudgeons and produced 120 horsepower. Each cylinder was 26 inches in diameter with a 21 inch stroke and was fitted to drive an individual shaft.[234] The boilers were a horizontal fire tube design positioned athwartships and equipped with a common flue. The three blade propellers were 7 feet in diameter and had 14 feet 6 inches of pitch.[235]

Trial of the *Dee* attracted considerable attention even though the twin-screw propulsion system was no longer as novel as it had been when the *Flora* and *Kate* were put into service. Aboard during the *Dee*'s trials were one of the owners Captain William G. Crenshaw, Vice-Admiral Sir George Sartorius, Commander T. E. Symonds of the Royal Navy, and "other gentlemen whose names are well known in the naval, scientific, and literary world."[236] As was previously the case, the majority of their attention was directed to the twin-screw system of propulsion and much of trials involved the ship's maneuverability using the screws. All of the tests proved satisfactory and the *Dee* attained a 15 knot speed under both screws with boilers up to normal capacity and burning patent fuel.[237]

The *Dee* was almost identical to the other Dudgeon vessels (Figure 26). The hull was fitted with a clipper bow that included a bowsprit and decorated trailboards. Two deck structures, one forward of the engineering space and one aft, provided accommodations for the officers and passengers. Two pole masts were designed for small fore and aft schooner rigs and were located immediately forward of the deck structures. Apparently unlike the previous vessels neither the masts nor the funnel were designed to be lowered to reduce the ship's visible profile.[238] Also, the *Dee* appears to have been fitted with some means of blowing off steam underwater as the discharge pipes apparent in representations of the *Flora*, *Kate* and *Hebe* are not included on the funnel in the representation of the *Dee*.[239] *Kate* was subsequently equipped with a

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234 *The Artizan*, "Marine Engineer from 1851 to the Present Time", 1 May 1865, p. 106 and *Army and Navy Gazette*, 29 August 1863.

235 *Transactions of the Institution of Naval Architects*, "Record of Performance and Experiences with Twin-Screw Steamers Built By J. & W. Dudgeon" VI, p. 209, London, 1865 and *Army and Navy Gazette*, 29 August 1863.

236 *Army and Navy Gazette*, 29 August 1863.

237 U. S. Consular Dispatch, London, 4 September 1863, RG-84, NA.

238 *Ibid.*

239 *Illustrated London News*, December 1862; U. S. Consular Dispatch, London, 13 May 1863 and U. S. Consular Dispatch, London, 4 September 1863.

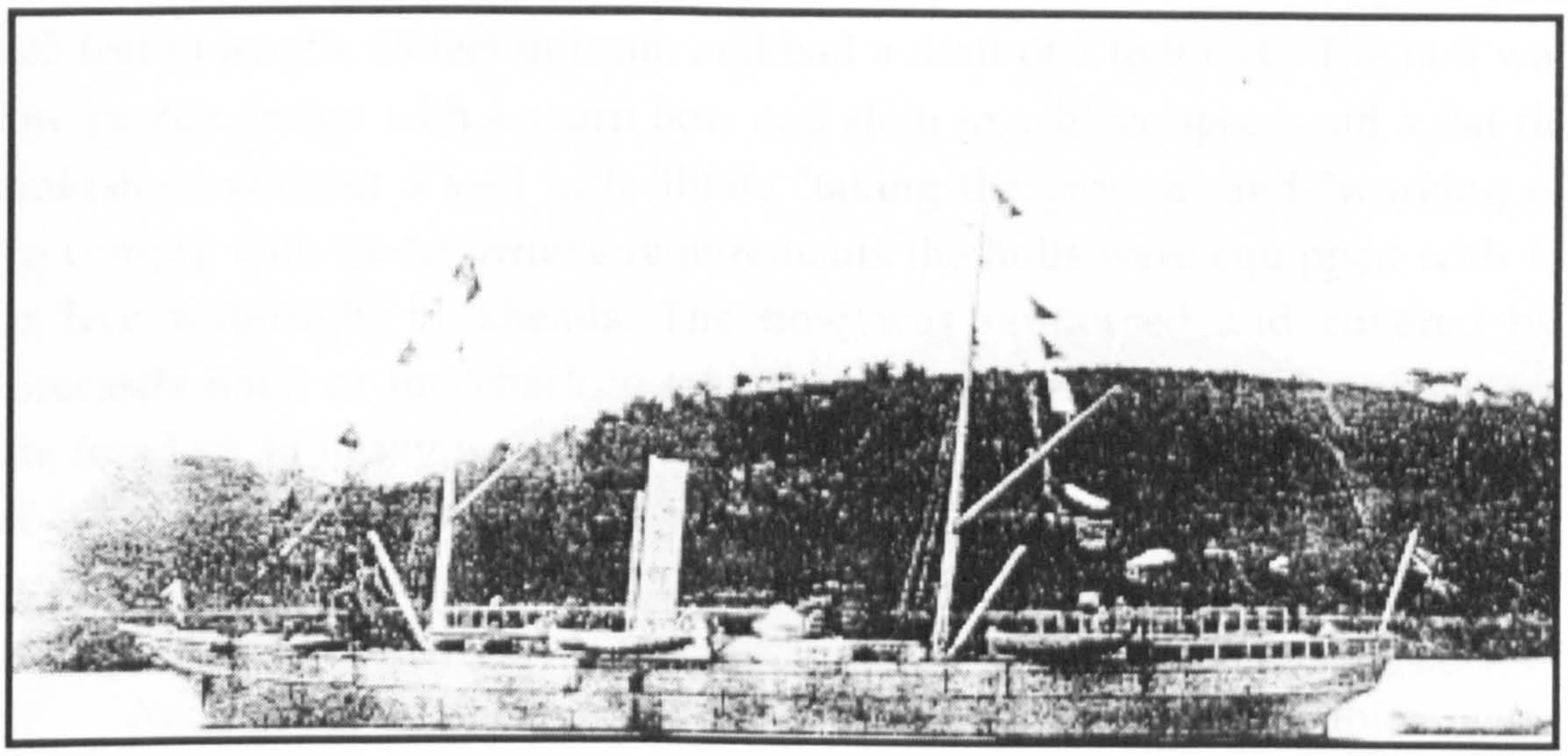

Figure 26. Photograph of the Dudgeon Steamer *Dee*.

"steam pipe on to the boiler leading to the donkey suction pipe to blow steam through the bottom" and some similar form of arrangement may have been built into the *Dee*.[240]

Early in September 1863, the *Dee* left the West India Dock in London and headed for Nassau with a combined civilian and military cargo.[241] Rather than going to Nassau the *Dee* headed for Bermuda and arrived in St. Georges on 28 September 1863.[242] After taking on coal and loading additional cargo the *Dee* cleared for Nassau. On 3 November under the command of Captain G. H. Bier the *Dee* headed for Wilmington.[243] Between November 1863 and February 1864, when the *Dee* was lost near Masonboro Inlet, the vessel ran successfully between Wilmington and both Bermuda and Nassau.[244]

Demands of blockade running required a combination of speed, shallow draft and low profile to provide some assurance of success by the summer of 1864. Addressing those requirements produced a distinctive vessel that was

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240 Unknown to M. Dudgeon, 30 June 1863, *ORN*, I, 9, p. 123.

241 U. S. Consular Dispatch, London, 11 and 18 September 1863, RG-84, NA.

242 Bermuda Customs, St. Georges In-bound, 28 September 1863, *Dee*, BA.

243 Bermuda Customs, St. Georges Out-bound, 2 November 1863 and Private Log of J. T. Gordon, *Cornubia*, 3 November 1863, *ORN*, I, 9, p. 278.

244 W. F. Spicer to B. F. Sands, 6 February 1864, *ORN*, I, 9, pp. 44-45.

considered characteristic of the clandestine trade. That ship was approximately 225 feet in length, 25 feet in beam and had a draft of 7 to 9 feet. The hull was a low profile design with a sharp bow and stern to achieve speed and a flat floor amidships without a keel to facilitate "taking the ground" and "working off." To comply with underwriter's requirements the hulls were equipped with four or five watertight bulkheads. The bow was reinforced and covered by a forecastle hood or turtleback to take the Atlantic seas and minimize water on the foredeck in heavy weather. A fantail stern was usually equipped with one of two wheels for steering. To make it more difficult to see at night and in heavy weather vessels running the blockade were almost universally painted white or a lead color.

Amidships the shear was broken by a paddle box with cabins, water closets or storage facilities fore and aft of each wheel. The majority of purpose-built blockade runners were equipped with two boilers. One was located forward of the paddle box and a second was located aft of the box. Raked funnels to carry smoke aloft were frequently designed to be retractable to lower their profile. Raked pole masts were positioned to facilitate cargo handling and carry light fore and aft gaff rigged sails.

Machinery in the arch-typical purpose-built blockade runner generally consisted of two oscillating steam cylinders. Spent steam was pumped into a condenser to recapture the water and return it to the boilers. Boilers were frequently fitted with super heaters like those of the *Stormy Petrel* to produce hotter, dryer steam. Many blockade runners were equipped to blow off excess steam underwater to prevent the noise giving away the ship's position. To improve both speed and efficiency, paddle wheels were generally fitted with patent feathering floats, some like those of the *Condor* were constructed of iron or steel.

Although it has frequently been suggested that the technology employed by blockade runners was specifically developed to satisfy the needs of the trade, that does not appear to be the case. Hull designs were adaptations of those that had proven effective on the Mersey, Clyde and Thames and the Irish Sea, English Channel and North Sea. The forecastle hood or turtleback was developed for steamers on the Irish and North Sea. Oscillating steam engines, the most popular type employed in purpose built blockade runners, had been patented years before the necessity for running the blockade. The feathering buckets employed on paddle wheels had been in use for more than two

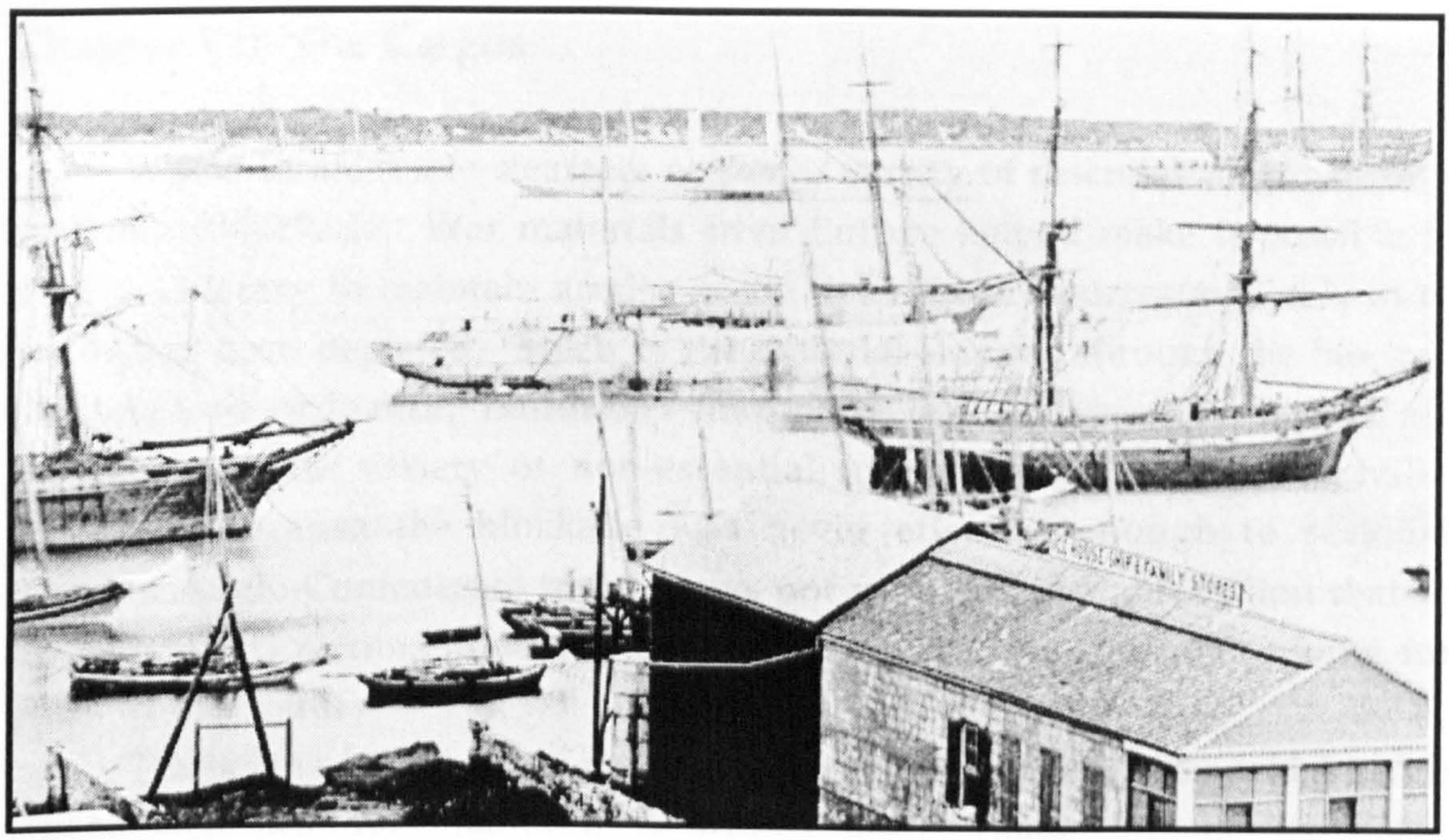

Figure 27. Photograph of Blockade Runners at Nassau.

decades. Retractable funnels had been designed to permit vessels to pass under bridges on rivers like the Thames. Fire tube boilers were not new and superheaters had been developed to produce hotter and dryer steam prior to the American Civil War. In the final analysis, blockade runners simply employed the most appropriate extant technology in their efforts to evade the United States Navy (Figure 27). Under the command of the right captain and crew that approach produced surprising success.

Chapter VII The Cargos

Anglo-Confederate steamers carried a variety of essential cargos through the Union blockade. War materials from Europe helped make it possible for the Confederacy to maintain armies in the field after resources available in the South had been depleted. Much of the material shipped through the blockade consisted of ordnance, munitions and other war materials. Cargos also included a wide variety of non-essential manufactured goods for civilian markets. Because the blockade was never effective enough to seriously threaten Anglo-Confederate trade it was not until late in the rebellion that the Confederate Government attempted to exert control over vessels running into ports in the South.

Trafficking in ordnance, munitions and military goods was prohibited by Queen Victoria's Proclamation of Neutrality and blockade runners carried on a clandestine trade. Historical sources reflect both the nature and extent to which those engaged in Anglo-Confederate commerce went to disguise their activities as legitimate commerce and the extent to which British authorities ignored or facilitated that trade. A rich collection of artifacts recovered from the remains of the Z. C. Pearson and Company steamer *Modern Greece*, suggested that shipwrecks would be the most important source of information on the nature of cargos shipped through the blockade.[1] Examination of the remains of blockade runners that have been located, identified and to some degree investigated during the thirty years since the *Modern Greece* was salvaged has demonstrated that, at least in North Carolina, wrecks may not be the most comprehensive source of cargo specific data. Most were effectively salvaged by enterprising Confederates or Union boarding parties. Archival research associated with wrecked and captured vessels revealed that untapped sources of historical data preserve surprising insight into the trade.

Work on the *Modern Greece* produced little information about the nature of surviving vessel remains but, produced the most comprehensive collection of material recovered from a blockade runner. Documentation of that important collection afforded the first insight into the specific nature of the

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1 Bright, et.al., *Modern Greece*, 1977.

material shipped through the blockade. The amount of material recovered from the *Modern Greece* suggested that other wrecks would also contain extensive cargo inventories.

Unfortunately, subsequent examination of additional wrecks indicates that may well not be the case. Of the remaining seventeen shipwrecks that have been examined, none have been found to contain the amount of cargo preserved on the *Modern Greece*. In fact, evidence from those sites suggests that the amount of cargo surviving in association with the hull remains could be marginal by comparison. Although several of the wrecks were found to be heavily covered by sand, the remains of the *Ranger, Ella, Condor, Stormy Petrel, Lynx, Hebe, Wild Dayrell* and *Phantom* were exposed enough to determine that only limited amounts of cargo remain at the wreck site.

Both the geographical distribution of the wrecks of blockade runners and additional historical research supports the theory that the *Modern Greece* could be an exception to the rule. The spatial distribution of the wrecks suggests that where possible, the vessels were run aground under the protection of Confederate batteries. That permitted the wreck to be protected by artillery while army units, black laborers and the ship's officers and crew attempted to recover the cargo. Both the archaeological and historical record confirm that Confederate salvage activity was highly successful. Historical and archaeological research associated with the *Ranger, Ella, Condor, Stormy Petrel, Lynx, Hebe, Wild Dayrell* and *Phantom* illustrate that effectiveness. Although little evidence of associated cargo was found on eight of the other identified blockade runners, it is possible that the heavily sanded sites and those yet to be located and identified could contain concentrations of material similar to that found on the *Modern Greece*.

In spite of the Proclamation of Neutrality issued by Queen Victoria, Britons generally adopted a neutrality of convenience. While Foreign Minister Lord John Russell took measures to ensure that Britain would recognize the Union blockade, he adopted the unofficial position that the blockade would be ineffective and British merchants could continue to maintain trade with the Confederacy as long as it was discrete and did not provoke a confrontation with

the United States.[2] In a letter to Russell touching on the situation, Lord Palmerston wrote:

> As to North America, our best and true policy seems to be to go on as we have [and] to keep quite clear of the conflict between North and South....I quite agree with you that the want of cotton would not justify such a proceeding, [combined French and British intervention in America] unless, indeed, the distress created by that want was far more serious than it is likely to be. The probability is that some cotton will find its way to us from America, and that we shall get a greater supply than usual from other quarters.[3]

Responding to an inquiry from United States Secretary of State Seward concerning the exportation of war materials to the Confederacy, Minister Charles Adams pointed out that British merchants were not restrained by either parliamentary law or crown regulations. By early 1862, British officials had made it clear that the trade developing at Nassau and Bermuda would not be constrained as long as customs and port regulations were not violated. In a letter to John B. Lafitte at Nassau, John T. Bourne wrote "You will see in our *Gazette* the proclamation prohibiting the exporting of Arms etc., but carefully read it and you will see that its simply notifying that such a law has received sanction [but will not be] acted on without England is at war with some power."[4]

Despite the publication of the Queen's proclamation in the 3 July 1861, *Royal Gazette* by the Colonial Secretary and the passage of an act prohibiting the importation of arms by the Bermuda Legislature in August 1862, Bermuda officials turned a blind eye to Anglo-Confederate trade. So obvious was their attitude that Bourne wrote A. I. M. Gilbert, Assistant-Receiver General at St. Georges on 4 January 1862 to blatantly complain that United States intentions to develop a coal depot in Bermuda was "highly prejudicial to the Mercantile interest of this Colony."[5] On 15 November 1861, Bermuda Governor H. St.

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2 Lord Russell to Lord Lyons, 16 August 1861, Lyons Papers, PRO.

3 Adams, Ephraim D., *Great Britain and the American Civil War*, 2 Vols., Vol. 1, Peter Smith, Gloucester, 1957, pp. 199-200, Palmerston to Russell, 18 October 1861, Lyons Papers, PRO.

4John T. Bourne to John B. Lafitte, 1 January 1862, Vandiver, *Confederate Blockade Running Through Bermuda*, p. 34.

5J. T.Bourne to A. I. M. Gilbert, Assistant-Receiver General at St. Georges, 4 January 1862, Vandiver, *Confederate Blockade Running, Through Bermuda*, p. 9.

George Ord received a circular from the Foreign Office that clarified proper treatment of Confederate merchant vessels. The opinion had been formulated by the "law Offices of the Crown" and specified that "no Foreign Consul has any power or jurisdiction to seize any vessel (under whatever Flag) within British Territorial Waters, and that the British Authorities ought not to take any steps adverse to Merchant vessels of the Confederate States, or to interfere with their free resort to British Ports."[6]

That circular went on to state that "supplies even of articles clearly 'Contraband of War' (such as Arms or ammunition) to the vessels of either party, the Colonial Authorities are not at liberty to interfere unless anything should be done in violation of the Foreign Enlistment Act which prohibits the "equipping, furnishing, fitting out, and arming of ships or vessels for the service of Foreign belligerent powers...."[7] Clearly that position provided colonial merchants with considerable latitude to support and engage in Anglo-Confederate trade.

One of the best sources of information on the nature and scope of Anglo-Confederate trade are the Bermuda Customs records. They provide insight into the vessels and cargos that were cleared through the Bermuda ports of St. Georges and Hamilton. Unfortunately, because of the clandestine nature of the trade those records are not entirely accurate or comprehensive. Most of the inbound manifests reflect a conscious effort to ensure that contraband was not specifically identified. Cargos from Confederate ports, on the other hand, appear to have been less sensitive to public scrutiny and throughout the rebellion were listed more accurately in Bermuda Customs records.

The first steamer to clear Bermuda Customs with a cargo from the Confederacy was the *Economist* which brought out "837 Bales Cotton" and "405 Bbls Rosin" and stopped in Bermuda enroute to Liverpool.[8] When the *Southwick* arrived on 2 May 1862 and the *Gladiator* cleared on 8 May 1862 their cargos from Charleston were listed in detail. The *Southwick* carried:

629 Bales Cotton
702 Bbls Turpentine
72 Tons 15 Cwt. Logwood

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[6]Bermuda Circular, Foreign Office, 15 November 1861, Governor's Papers, BA.
[7] *Ibid.*
[8]Bermuda Customs, In-bound, St. Georges, *Economist* 19 April 1862, BA, and Bermuda Customs, Out-bound St. Georges, *Economist* 6 March 1862, BA.

20 Pieces Ebony
65 -Do- Satin Wood [9]

The *Gladiator* had on board:

932 Bales Cotton
100 Bbls Rosin
2 Bbls Oil
3 -Do- Ale
8 -Do- Bread
3 Kegs Paint
75 Packages Tobacco
1 _____ Sugar
1 _____ Butter[10]

Cotton, tobacco and to a lesser degree the rosin carried on the *Southwick* and *Gladiator* were typical of the cargos brought out of Confederate ports.

The Confederate steamer *Cornubia* consistently brought out cotton, tobacco, turpentine and occasionally rosin. The following table of the *Cornubia*'s cargos entered at St. Georges effectively illustrates the nature of material taken out of the Confederacy.

Cornubia

Date	Cotton	Tobacco	Turpentine	Rosin
19/1/63	304 bales	30 boxes	1 barrel	9 barrels
19/2/63	324 bales	26 boxes	2 casks	
23/3/63	314 bales	27 cases	2 casks	
27/7/63	268 bales	104.5 tierces		
8/9/63	384 bales		19 barrels	
17/10/63	364 bales	5 boxes	5 barrels	

When the North Carolina owned steamer *A. D. Vance* was captured running out of Wilmington on 10 September 1864, the vessel was carrying 391 bales of cotton, 3301 pounds of loose cotton, 10 barrels of spirit turpentine, 64 yellow pine planks, 2 manilla hawsers and 1 hemp hawser as cargo.[11] The

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[9]Bermuda Customs, In-bound, St. Georges, *Southwick*, 2 May 1862, BA.
[10] Bermuda Customs, In-bound, St. Georges, *Gladiator* 8 May 1862, BA.
[11] Cargo of *A. D. Vance*, New York District Court Records, 181-13, NA, Bayonne New Jersey Regional Center.

following table of the *A. D. Vance*'s cargos entered at St. Georges illustrates the nature of material that vessel took out of the Confederacy.

A. D. Vance

Date	Cotton	Tobacco	Turpentine	Rosin
27/7/63	500 bales		10 barrels	
26/9/63	530 bales		35 barrels	
12/2/64	670 bales	1 box	9 barrels	
19/3/64	1 bag	2 boxes		

The steamer *Annie,* owned and operated jointly by the State of North Carolina and Alexander Collie and Company, was captured on 1 November 1864 with a cargo consisting of 225 bales of cotton, 168 tierces of tobacco, 92 boxes of tobacco and 8 barrels of spirit turpentine.[12] The other vessel owned jointly by North Carolina and Alexander Collie was the steamer *Hansa.* On two documented trips through the blockade that vessel brought out a total of 945 bales of cotton, 77 tierces of tobacco, 7 half tierces of tobacco and 8 barrels of spirit turpentine.[13] The *Mary Celestia* owned by Colonel William Crenshaw and Company cleared at St. Georges three times before being lost on the reefs south of Sinky Bay, Bermuda in September 1864. On those three voyages the *Mary Celestia* brought in a total of 1,877 bales of cotton and 4 barrels of spirit turpentine.[14]

At Wilmington, cotton was by far the most important export. In a 2 September 1863 message to John Slidell, Confederate Secretary of State Judah P. Benjamin reported that cotton exports at Wilmington, North Carolina amounted to $3,240,000 dollars per year. That amount was more than four and a half times the foreign commerce of the entire state in 1858.[15] In April and May 1863, fifteen thousand bales of cotton were exported from Charleston and Wilmington.[16]

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12 Cargo of *Annie,* New York District Court Records, 184 -3, NA, Bayonne New Jersey Regional Center.

13 Bermuda Customs, In-bound, St. Georges, *Hansa,* 7 September 1863, BA and Bermuda Customs, In-bound, St. Georges, *Hansa,* 16 February 1864, BA.

14Bermuda Customs, In-bound, St. Georges, *Mary Celestia* 9 July 1863, 4 July 1864 and 29 July 1864 September 1863, BA.

15 J. P. Benjamin to John Slidell, 2 September 1863, in James D. Richardson, *Messages and Papers of the Confederacy,* 2 vols., Vol. 2, United States Publishing Company, Nashville, Tennessee, 1905, pp. 550-551.

16*Ibid.*

During the month of July 1863 vessels brought more than 2,174 bales of cotton from Wilmington alone. The *Gladiator* carried 1130 bales, the *Cornubia* carried 236 bales, the *A. D. Vance* carried 500 bales, the *Banshee* brought out 44 bales having had to throw most of the cargo overboard to escape a chase and the *Eugenie* brought out 264 1/2 bales.[17] During 1863, at least 14,170 bales of cotton were brought out through the blockade at Wilmington by steamers.[18] The following year that number increased to 36,625 bales in spite of the increased number of Union vessels committed to closing the Cape Fear to Anglo-Confederate trade.[19] That amount of cotton was 20% more than was exported from Wilmington in 1860.[20]

In addition to cotton, Anglo-Confederate steamers brought tobacco and naval stores through the blockade to finance Confederate acquisitions. Because tobacco was shipped in tierces, boxes, caddies, packages and hogsheads it is difficult to calculate the amount shipped through Bermuda. In 1862, the *Gladiator* brought 75 packages of tobacco into St. Georges. The following year steamer cargos at St. Georges included 495 boxes, 382 tierces, 179 packages and 27 cases of tobacco. In 1864, the amount of tobacco coming to Bermuda from Wilmington increased by a factor of almost ten. At St. Georges 4,787 boxes, 1,013 tierces, 477 drums, 62 packages, 62 caddies, 85 keys and 27 cases, 20 hogsheads and 402 pounds of tobacco were recorded by Bermuda Customs.[21]

Prior to the rebellion, naval stores had been one of the most important export commodities at Wilmington. The 1860 Kelley's Wilmington Directory claimed that the city was the largest naval stores market in the world.[22] During the 1860-1861 season for naval stores, 37,000 barrels of crude turpentine, 42,000 barrels of spirits of turpentine, 140,000 barrels of rosin and 35,000 barrels of tar were exported.[23] During the blockade exports of naval stores fell off dramatically. Steamers only rarely carried rosin and only 644 barrels and 56

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17 Bermuda Customs, In-bound, St. Georges, *Gladiator* 21 July 1863, *Cornubia* 27 July 1863, *A. D. Vance* 27 July 1863, *Banshee* 27 July 1863 and *Eugenie* 27 July 1863, BA.

18 Inventory of Bermuda Customs Records, In-bound, St. Georges, 1863 BA.

19 Inventory of Bermuda Customs Records, In-bound, St. Georges, 1864, BA.

20 Joseph C. G. Kennedy, *Agriculture of the United States In 1860; Compiled from the Original Returns of the Eighth Census Under the Direction of the Secretary of Interior.* Government Printing Office, Washington, 1864. p. 109.

21 Inventory of Bermuda Customs Records, In-bound, St. Georges, 1862, 1863 and 1864, BA.

22 *Kelley's Wilmington Directory,* Wilmington, North Carolina, 1860-1861, p. 13.

23 Richard E. Wood, "Port Town at War: Wilmington, North Carolina 1860-1865." Unpublished Ph. D. Dissertation, Florida State University, 1976, p. 3.

casks of turpentine were brought out to Bermuda in 1863. The following year that amount dropped to only 73 barrels.[24] That volume suggests that a few captains carried a limited amount of turpentine to soak cotton for burning in the boilers in the event of a close chase. That practice was apparently employed on more than one occasion.[25]

While the cargos of blockade runners inbound from Wilmington were carefully listed at St. Georges, Bermuda Customs agents exercised discretion in entering and clearing Anglo-Confederate vessels with cargos shipped from Europe throughout the war. In 1862, that discretion must have been of considerable importance as steamers arriving from Great Britain were consistently entered with cargos of "General Merchandize". The *Economist*, the first steam blockade runner to arrive in Bermuda, was entered at St. Georges on 28 February 1862 with a cargo listed as "General Merchandize". The captain listed the vessel's destination as Melbourne.[26] The *Southwick*, *Bermuda* and *Herald* entered at St. Georges in March 1862. While the *Southwick* was entered with "General Merchandize", the entire cargo of *Bermuda* was listed in meticulous detail. The *Herald* was entered with 94 cases of "Stationary & Printing Materials."[27]

By the fall of 1862, Bermuda Customs agents at St. Georges began to relax their efforts at discretion. When the Fraser, Trenholm and Company steamer *Minho* cleared for Halifax on 26 September, the inventory included not only "General Merchandize" and "Hardware" but a surprisingly detailed list of material that included:

48 Hhds: Brandy
21 1/2 Casks Do:
63 Cases-Do
10 Casks Wine
673 Cases Wine
6 -1/4 Gs Whiskey
14 Hhds Spirits
8 Cases Apothey Ware
1 Do Marine Glasses
1 Do Cutlery, 7 Cases Quinine
2 Bales Mdze
641 Cases Genl Mdze
441 Cases Hardware
31 Boxes Candles
5 Cases Drugs
3 Parcels Thread
8 Packages Mdze (Boots)
12 Chest Tea "Ex Merrimac"
1 Case Stationery
12 Cases Mustard & Starch
37 Bbls Ale & Porter
6 Do Crushed Sugar
1 Box Sardines
4 Cases Mdze: (Meats)
14 Kegs Gunpowder
2 Cases Maize

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24 Inventory of Bermuda Customs Records, In-bound, St. Georges, 1863 and 1864.
25 Thomas E. Taylor, *Running the Blockade*. London: J. Murray, 1897, p. 80.
26 Bermuda Customs, In-bound, St.Georges, *Economist*, 28 February 1862, BA.
27 Bermuda Customs, Out-bound, St. Georges, *Herald*, 25 October 1862, BA.

83 Do Mdze
4 Do, Do
176 Packages General Mdze
500 Bags Salt
12 Sacks Do
7 Rolls Lead
3 Bags Pepper
10 Do. Coffee
25 Sheets Iron
3 Cases Cream[28]
5 Cases Tea
1 Do Screws
8 Cases Tin
2 Do Shoes

Another Fraser, Trenholm and Company vessel, *Herald,* cleared for St. Johns, New Brunswick on 25 October and St. Georges Customs recorded:

30 Cases Quinine
201 Cases Hardware
101 Cases General Mdze:
64 Bbls: Combustible do-
167 Boxes -Do:- -Do-
500 Bags Salt Petre
500 Bbls: Gunpowder
3 Cases Merchandize
4 Casks Brandy
1 Hhd: Sherry Wine
1 Case Merchandize
25 Hams & 25 Cheese
12 Cases Brandy
52 Bundles Oakum
42 Cases & Trunks Consistg
Boots, Shoes Flannels &
General Merchandize[29]

That general combination of unidentified "General Merchandize," "Hardware" and "Combustible Merchandize" and more specifically identified goods such as consumables, wines and liquors, bulk metals and chemicals, gunpowder and ammunition characterize the outward Bermuda Customs cargo manifests for the remainder of the period of blockade running. The extent to which customs agents went to disguise cargos that were clearly in violation of British neutrality is readily apparent when the documents associated with blockade runners are compared with vessels that continued to serve Bermuda's traditional commerce with New York and Halifax. Manifests of vessels like the

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28 Bermuda Customs, Out-bound, St. Georges, *Minho,* 26 September 1862, BA.
29 Bermuda Customs, Out-bound, St. Georges, *Herald* 25 October 1862, BA.

Princess Royal, Hound, Merlin, Alpha, Delta, Harkaway and *Oleander* were meticulously recorded for each voyage.[30]

The first steamer to clear at Bermuda was the iron screw *Fingal* dispatched by Confederate agents Bulloch and Anderson. At St. Georges on 4 November 1861, the *Fingal* was listed as having a "General Cargo of Merchandise."[31] The *Fingal* cleared Bermuda Customs at St. Georges with nothing more that the statement that "Inward Cargo Outwards."[32] William Cook, United States Consul in Glasgow, had been instructed by Minister Charles Adams to investigate the *Fingal* and his reports confirmed that the steamer was actually carrying "about 300 or 400 Bales which may contain Army uniforms and clothing, about 300 cases of rifles and 150 cases of pistols, some cannon (3 or more), and gunpowder."[33] Cook subsequently forwarded a copy of the 12 October 1861 *Clyde Bill of Entry* which contained a declaration of the *Fingal*'s cargo. That included:

> Fingal (ss) of Glasgow, Anderson, Honduras, 325 (30 men)
> -C S Caird
> with 410 bxs, 73 bls, 236 cks, 1091 cs, 1 trk-11,340 rifles £42,660, 60 pistols £210, 24,100 lbs gunpowder £805, 409,000 cartridges £1195, 550,000 percussion caps £162, apparel £600, apothecaries' wares £80, 500 sabres £350, wrot leather £200, 4 pcs ordnance (12 1/2 ts) £300, 1 1/2 ts lead shot £35, 7 ts shells £929, 230 swords £230, 9982 yds blankets £1240[34]

The screw steamer *Economist*, that cleared at St. Georges on 27 February 1862, and the screw steamer *Southwick*, that cleared at St. Georges on 22 March 1862, were both listed as carrying nondescript cargos of "General Merchandze" a term that would be used extensively by Bermuda Customs agents to describe Anglo-Confederate goods of every description for the duration of the blockade.[35] Although cargos like that carried on 24 March 1862, by the paddle steamer *Herald* were identified as cases of "Stationary and Printing Materials"

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30 Bermuda Customs, In-bound, St. Georges, 1862, 1863 and 1864, BA.

31 Bermuda Customs, In-bound, St. Georges, *Fingal*, 4 November 1861, BA.

32 *Ibid.*

33 U. S. Consular Dispatch, Glasgow, 8 October 1861, RG 84, NA.

34 Clyde Bill of Entry and Shipping List, 12 October 1861, Vol. XX, No. 123, Glasgow included with U. S. Consular Dispatch, Glasgow, 18 October 1861, RG 84, NA.

35 Bermuda Customs, In-bound, St. Georges, 27 February and 22 March 1862, BA and Bermuda Customs, Out-bound, St. Georges, 6 and 24 March 1862, BA.

most descriptions were limited to "Cases Merchandize" or "Mdze & Hardware" and "Cases Mdze Combustible Nature."[36] Exceptions were "Gunpowder" and "ammunition" which may have been documented due to the necessity for special handling and storage.[37]

When the steamer *Peterhoff* arrived from Hull on 2 August 1862, the vessel was entered with "General Mdze" but the declaration revealed that the cargo consisted of "Wines, Brandies & Manufact Goods".[38] The *Gladiator* arrived from Liverpool on 22 August with a cargo of "1468 Cases Gen^{el} Manufac^{t} Mdze & Hardware, 1021 Bags Saltpetre, 1085 Cases Mdze Combustible Nature, 1066 Bbls Gun Powder."[39] "General Mdze & 1200 Bbls Gunpowder" was the cargo listed for the steamer *Merrimac* that followed *Gladiator* on 5 September 1862.[40] The *Anglia* was reported to have been loaded "a large quantity of arms" in London but, entered at St. Georges with "General Merchandize" and cleared for Nassau in "Ballast."[41] The Confederate steamer *Cornubia* also entered at St. Georges on 3 December 1862 in ballast in spite of the fact that the U. S. Consul at Glasgow reported that the vessel was "loaded with goods contraband of war and supplies for persons in insurrection against the government of the United States."[42] On clearing Bermuda Customs those same vessels were also listed as carrying "Inward Cargo Outwards" as was the case with the steamer *Fingal* or "General Merchandize" like the *Economist*.[43]

The clandestine nature of blockade running and the lengths to which Confederate agents and British merchants went to avoid any suggestion that their activities violated British law contributed significantly to the fact that historical documentation cannot support the development of a detailed picture of the trade. Material salvaged from the remains of the *Modern Greece* provided considerable archaeological insight into the issue and suggested that

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36 Bermuda Customs, In-bound, St. Georges, *Herald* 24 March, *Phoebe* 28 July and *Gladiator* 23 August 1862, BA.

37 Bermuda Customs, In-bound, St. Georges, *Phoebe* 28 July and *Gladiator* 23 August 1862, BA.

38 Bermuda Customs, In-bound, St. Georges, *Peterhoff* 2 August 1862, BA.

39 Bermuda Customs, In-bound, St. Georges, *Gladiator* 22 August 1862, BA.

40 Bermuda Customs, In-bound, St. Georges, *Merrimac* 5 September 1862, BA.

41 Bermuda Customs, In-bound, St. Georges, *Anglia* 21 July 1862, BA and Bermuda Customs, In-bound St. Georges, *Anglia* 8 August 1862, BA.

42 U.S.Consular Dispatch, Glasgow, 1 September 1862, RG 84 , NA.

43 Bermuda Customs, Out-bound, St. Georges, *Fingal* 4 November 1861, BA and Bermuda Customs, Out-bound, St. Georges, *Economist* 6 March 1861, BA.

investigation of additional shipwrecks could generate data unavailable in the historical record.

More than ten thousand artifacts were recovered from the wreck of the *Modern Greece* following rediscovery of the wreck in 1962.[44] That collection was published by the North Carolina Division of Archives and History in 1977.[45] For the purpose of that publication the collection was divided into ship's equipment and fittings, firearms and ordnance, bulk materials, surgical instruments, tools and implements, edged weapons and pocket knives, housewares, hardware, containers and miscellaneous material. Firearms and ordnance recovered from the *Modern Greece* consisted almost entirely of Whitworth projectiles and Enfield rifles and accoutrements. The Whitworth projectiles were of two varieties. Of a total of 85 that were recovered, 75 proved to be solid bolts and 10 were found to be explosive shells. Both the shells and bolts were originally packed 10 to a case. One of the 12-pounder Whitworth rifles salvaged from the *Modern Greece* remains in the collections of the Washington Navy Yard Museum in Washington, D. C.[46]

In addition to the Whitworth projectiles, material from the *Modern Greece* included the remains of 215 Enfield 1853 pattern rifled muskets. With the exception of three contract rifles that were produced by Ward and Sons of Birmingham, the entire collection appears to have been produced by either the Royal Small Arms Factory at Enfield or the London Armory Company of Bermondsey.[47] The collection of Enfields includes both the three band rifle-muskets and the two band short rifles. The rifles were packaged in cases of 24 with shipping plugs, nipple protectors, bayonets, leather slings and a bullet mold. Two types of bayonets were included; 93 triangular socket bayonets for the rifled muskets and 104 saber bayonets for use with the short rifles. A total of fifteen clusters of percussion caps and several hundred .577 caliber rifle projectiles with boxwood base plugs were also recovered.[48]

Bulk cargo included ingots of both lead and tin. The lead ingots averaged 142.5 pounds in weight and ranged in from as little as 127.5 pounds to as much as 158 pounds. With one exception, each of the lead ingots was

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44 Watts and Bright, *IJNA*, 1973.

45 Bright, et.al., NCDAH, 1977.

46 *Ibid.*, pp. 49 and 58.

47 Bailey, D. W. *British Military Longarms 1715-1865*. London: Arms and Armour Press, 1971.

48 Bright, et.al., NCDAH, pp. 54-57.

stamped: "Bagillt Works" and "Newton Keats & Co." at "Liverpool."[49] The exception was stamped: "Bagillt Works" and "Newton Lyon & Co." at "Liverpool."[50] Each of the bars was stamped with a number and some were additionally stamped with a letter or combination of letters.[51]

A total of 43 ingots of tin were also recovered from the *Modern Greece*. The tin ingots averaged 58.85 pounds in weight and ranged in from as little as 51.5 pounds to as much as 74 pounds. Each of the tin ingots was marked "T BOLITHO & SONS PENZANCE" on one end and contained the representation of a sheep with a banner over the name "CHYANDOUR" on the other end. Three different types of banners were identified among the 43 ingots. Two are suggestive of the English cross of St. George and the other the banner of Scotland.[52]

Bulk material also included seventeen cases of tinned steel sheets. Each case held 125 sheets, each .026" thick and 11 inches by 16 inches in width and length. A single spool of wire was recovered from the *Modern Greece*. That spool was 18 inches in diameter and 36 inches in length. The spool had a core of copper wire that was covered by steel wire. The copper wire was .125 inches in diameter and the steel was .055 inches in diameter.[53] Two kegs were found to contain approximately 200 pounds of horseshoe nails in three sizes.[54]

Six surgeons medical field kits were included in the collection. The kits were shipped in rectangular mahogany boxes that were fitted with brass hardware. The kits included a variety of instruments including tongue depressors, surgical knives with wood and gutta-percha handles, probes, bone saws, scalpels, scarifiers and a tourniquet press both marked "W. & H. Hutchinson, Sheffield."[55]

Tools and implements carried by the *Modern Greece* included a dozen axes, 38 flat metal drill bits, 14 ratchet drills, 9 hammer heads, 11 cold chisels and approximately 1,600 wood chisels of three basic types. Three maker's marks associated with the chisels included "Wright Holdsworth & Co.," "C. Henry Sheffield" and "John K. Turner Sheffield." A keg of files was estimated

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49 *Ibid.*, pp. 59-63.
50 *Ibid.*, p. 59.
51 *Ibid.*, pp. 59-63.
52 *Ibid.*, pp. 64-69.
53 *Ibid.*, pp. 70-71.
54 *Ibid.*, p. 152.
55 *Ibid.*, pp. 73-83.

to contain approximately 1,000 triangular, flat and half round types. In addition 35 packages were estimated to contain another 1,150 files and 156 were found loose. Approximately 746 wood gouges ranging from 1/8 to 1" were clustered in sets of a dozen.[56]

Each of 134 hoes in the collection were found to have been stamped "Yates & Co., Aston Manor." Another collection of 50 hand saw blades and one consisting of 91 picks had no identifying makers marks. Three wood handles accompanied the saw blades. The picks were of two types. One type had two pick ends and the other was equipped with a pick and mattock combination.[57] No handles accompanied the hoes or mattocks. A dozen axes and 13 hatchets were also shipped without handles.[58] Although probably not part of the cargo, the *Modern Greece* also carried a set of dies with handles and a set of taps, a carpenter's marking gauge, awl and rasp handles, a screw driver and several adjustable wrenches.[59]

The cargo of the *Modern Greece* included both side and pocket knives. The side knives included 107 complete knives, 84 blade fragments and 94 handle fragments. The collection included a wide range of blade and handle types. Blades included several clip point and spear point designs and handles included a wide variety of stag, wood, cast German silver and combination cast German silver and mother of pearl. No manufacturers marks were found on the side knives. Styles suggest that some of the side knives could have been made by George Worstenholm & Son at Sheffield and some of the German silver handles could be attributable to John Biggin also of Sheffield.[60] A variety of sheath hardware was found in association with the knives.[61]

A total of twelve types of pocket knives were found on the *Modern Greece.* The knives were packaged in lots of six or twelve and were wrapped in paper for shipping. Some were fitted with one blade, others with two. Handle material included gutta-percha, wood and stag. Only one manufacturer's mark, "J. K. Turner & Co. Sheffield," was found on the side knives.[62]

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56 *Ibid.,* pp. 83-95.
57 *Ibid.,* pp. 99-103.
58 *Ibid.,* pp. 83 and 99.
59 *Ibid.,* pp. 102-108.
60 Richard Washer, *The Sheffield Bowie & Pocket-knife Makers 1825-1925,* Zeros Printers, Nottingham, 1974 and Bright, et.al., NCDAH, 1977, pp. 110-120.
61 *Ibid.,* pp. 128-132.
62 *Ibid.,* pp. 122-127.

A variety of domestic or household items included 86 flat irons produced by "Tho. Green" and "W. LEES & SONS" that weighed from 4 to 5.5 pounds. Four large cooking forks and approximately 1,000 table forks, some with ebony handles and some entirely of metal were packed in conjunction with table knives. The table knives were fitted with ebony and gutta-percha handles. Maker's marks were limited but include "John K. Turner Sheffield" and "C. WALTERS & CO. GLOBE WORKS SHEFFIELD." Spoons included 11 serving, 72 table and 65 teaspoons. Approximately 200 pair of scissors of four designs were present in the cargo.[63]

Material recovered from the *Modern Greece* suggested that continued investigation of blockade runners could produce additional information concerning the specific nature of cargos run through the blockade. One of the objectives of blockade runner related research has been to identify another wreck with an undisturbed cargo. During the past thirty years, the remains of eighteen blockade runners have been located, identified and to some degree investigated. Those vessels include the *Modern Greece* and *Kate* lost in 1862, the *Hebe, Phantom, Arabian, Elizabeth, Douro, Venus* and *Beaureguard* lost in 1863 and the *Bendigo, Ranger, Wild Dayrell, Dee, Fanny & Jenny, Lynx, Ella, Stormy Petrel* and *Agnes E. Fry* lost in 1864.

Of those wrecks the *Kate, Douro* (1), *Arabian, Beaureguard* and *Lynx,* were lost running out with cargos consisting of cotton and naval stores. The remaining vessels, *Hebe, Phantom, Elizabeth, Douro (2), Venus, Bendigo, Ranger, Wild Dayrell, Dee, Fanny & Jenny, Ella, Stormy Petrel* and *Agnes E. Fry* were lost running in with cargos from Europe. Examination of those wrecks and the historical record associated with them confirmed that they were effectively salvaged or the cargos destroyed.

The *Hebe* and *Venus* were run ashore under the guns of Half Moon Battery. A company from Fort Fisher was engaged in salvaging cargo from the *Hebe* when they were attacked by six Union vessels and a landing party that captured one of the Whitworth rifles from the *Modern Greece.*[64] Acting Ensign E. H. Dewey boarded the *Hebe* with a party from the USS *Niphon* and reported that the cargo consisted of "coffee, drugs and medicines, clothing, and

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63 *Ibid.,* pp. 133-148.

64 Governor Z. B.Vance Papers, P. C. 15.3, pp. 229-230, NCDAH and J. B. Breck to A. L. Case, 18 August 1864, *ORN,* I, 9, pp. 166-167.

a few bales of silk."[65] Examination of the wreck confirmed that the hull had collapsed to the turn of the bilge and nothing was exposed in the cargo holds.[66] A boarding party form the USS *Nansemond* reported that the cargo of the *Venus* consisted of "lead, drugs, dry goods, bacon, and coffee."[67] As the *Venus* was also under the guns of Half Moon Battery, Confederate soldiers from Fort Fisher were able to salvage portions of the cargo that survived the fire set by the *Nansemond*'s boarding party and a considerable amount of material from the vessel itself. Because the *Venus* cleared at Nassau for the run through the blockade no final cargo manifest has survived. An advertisement placed in the 16 December 1863 *Wilmington Journal* by Wreck Master J. A. Sanders announced the auction of material from the *Venus*. Salvaged material included "ANCHORS, CHAINS, RIGGING, ROPE, BAR & SHEET IRON, BRASS AND COPPER, FILES, PARTS OF THE ENGINES, STOVES, FURNITURE, AND ONE LARGE SAIL."[68]

The *Phantom* and *Wild Dayrell* were run ashore well north of the protection of any permanent Confederate battery. "Flying" Whitworth batteries from Fort Fisher were quickly moved into position to provide sufficient protection for salvage operations. When the *Wild Dayrell* went aground in Rich Inlet on 1 February 1864, the crew threw overboard as many packages of merchandise, shoes, blankets and provisions as possible and set the ship on fire before being discovered and chased away by the USS *Sassacus*. Most of what they were able to throw overboard floated to the beach and was recovered.[69] Because the wreck was above Masonboro Inlet Confederate forces could not protect the steamer by bringing artillery up the beach to drive Union vessels away from the wreck. However, by the time the USS *Florida* returned to the wreck on 5 February a battery of rifled Whitworth cannon opened fire from the mainland hitting the vessel wounding one member of the crew.[70] Goods thrown overboard, although frequently damaged, were reported to the

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65 E. H. Dewey to J. B. Breck, 18 August 1864, *ORN*, I, 9, pp. 167-168.
66 Watts, *Hebe* survey notes 10 July 1988, on file with author.
67 R. H. Lamson to S. P. Lee, 21 October 1863, *ORN*, I, 9, pp. 249-250.
68 *Wilmington Journal*, 16 December 1863, p. 3, col. 4.
69 F. A. Roe to S. P. Lee, *ORN*, I, 9, pp. 438-439.
70 P. Crosby to S. P. Lee, 5 February 1864, *ORN*, I, 9, pp. 460-461.

Wilmington Wreck Master and sold for the benefit of the owners and salvors.[71] Because the *Wild Dayrell* cleared at Nassau for the final voyage no list of the cargo has survived.

Although Commander John J. Almy informed S. P. Lee that "we shall try to make everything a total wreck....the rebels shall not have a remnant of her" material was also recovered from the *Phantom*.[72] On 29 September, the USS *Niphon* shelled the wreck of the *Phantom* for an hour and a half firing 76 rounds and hitting the target 20 times.[73] The impact was apparently marginal as most of the cargo was apparently saved. On 30 September Major-General W. H. C. Whiting reported to Chief of Ordnance Colonel Gorgas that:

> Captain Porter has, with great gallantry and much personal exposure, directed successfully the troops and his crew in saving the cargo, under a daily and heavy fire, and in this he deserves in every way the consideration and commendation of the Department.
>
> The loss of the vessel is what may happen to any commander. The course he has pursued since belongs to himself, and I hope that he will be continued in service for the good of our cause.
>
> Backed by our brave soldiers, I think that the saving of the cargo of the *Phantom* is due to the personal skill and gallantry of Captain Porter.[74]

In his report to the War Department on 15 November 1863, Secretary of War James Seddon reported that importation by the steamers *Columbia, R. E. Lee, Merrimac, Eugenie,* and *Phantom* between 30 September 1862 and 30 September 1863 included: 113,504 small arms, large quantities of saltpeter, lead, cartridges, percussion-caps, flannel and paper for cartridges, leather, hardware and three 8-inch rifled and 12 3/4 inch rifled Blakeley guns. At least two of those Blakeley rifles, some of the leather goods, powder and some quantity of Austrian rifles were recovered from the *Phantom*.[75] *Phantom*'s manifest for the final voyage from St. Georges included:

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71 *Wilmington Daily Journal*, 19 November 1863, p. 3, col. 4.

72 J. J. Almy to S. P. Lee, 23 September 1863, ORN, I, 9, pp. 216-217 and *Richmond Whig*, 29 September 1863.

73 Abstract log of the USS *Niphon*, 29 September 1863, ORN, I, 9, pp. 221-222.

74 W. H. C. Whiting to J. Gorgas, 30 September 1863, ORA, I, 29, p. 763.

75 Report of the Secretary of War, 15 November 1863, ORA, IV, I, pp. 955-956 and Bermuda and Bermuda Customs, Out-bound, St. Georges, *Phantom* , 19 September 1863, BA.

200 Pigs Lead
2 Blakeley Guns
50 Cases Leather
50 Cases Austrian Rifles
135 Barrels Pork
150 Casks Gunpowder
1 Case Merchandize[76]

Cargos from the wrecks of the steamers *Dee* and *Fanny & Jenny* were also at least partially salvaged. After the *Dee* was discovered on 6 February 1864, a boarding party from the USS *Niphon* threw over 170 pigs of lead. The remainder of the cargo, bacon and spirits, were burned and the vessel was "completely destroyed" when the boarding party abandoned ship.[77] After Union vessels abandoned their efforts to destroy the *Dee*, Confederate salvors recovered most of the remaining lead. Four days later the *Fanny & Jenny* was driven ashore north of Masonboro Inlet immediately south of the *Dee*.[78] Efforts to get the *Fanny & Jenny* off proved impossible because the remarkably accurate fire from a Whitworth battery drove the USS *Florida* away from the wreck.[79] On 15 February 1864, the "HULL, MACHINERY, BOATS and all appurtenances belonging to the Steam Ship *Fanny and Jenny* as she now lies stranded near Wrightsville Sound" were advertised for auction the following day by Wilkes Morris at Wilmington.[80] According to Commander Crosby of the USS *Florida*, the *Fanny & Jenny* was carrying a cargo of coal and "small articles of merchandise."[81] Because the *Fanny & Jenny*'s last voyage originated at Nassau no historical evidence of the cargo survives.

At Lockwoods Folly Inlet the steamers *Elizabeth* and *Bendigo*, were both salvaged. The *Elizabeth* was run ashore and unloaded before Captain Thomas Lockwood set the vessel on fire on the morning of 24 September.[82] On 3 October the hull and machinery of the *Elizabeth* were advertised for auction. The *Wilmington Daily Journal* advertisement indicated that the engines were

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76Bermuda Customs, Out-bound St. Georges, *Phantom*, 19 September 1863, BA.
77 B. F. Sands to S.P. Lee, 7 February 1864, *ONR*, I, 9, p. 467.
78 P. Crosby to S.P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474.
79 P. Crosby to S.P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474 and Keeler, Aboard the USS *Florida*, pp. 149-154.
80 *Wilmington Daily Journal*, 15 February 1864, p. 3, col. 3.
81 P. Crosby to S.P. Lee, 10 February 1864, *ORN*, I, 9, pp. 473-474
82 Notes on Information from Prisoners taken from the *Douro* by Lt. Lamson, USS Nansemond, 12 October 1963, *ORN*, I,9, p. 234.

in good order and the coppered hull contained valuable material for salvage.[83] When the *Bendigo* was found by the USS *Fahkee* on the morning of 3 January 1864 there was "no cargo or freight of any description on board."[84] Because the *Elizabeth* and *Bendigo* cleared from Nassau no customs records are available to shed light on the cargo.

The *Ranger* ran aground off Holdens Beach early on the morning of 11 January and was scuttled and burned to prevent Union vessels from salvaging the cargo or getting the steamer afloat. At night and in "thick weather" rifles and tools on the *Ranger* were salvaged by Confederates that commanded the Holdens Beach shoreline.[85] *Ranger*'s outbound cargo listed at St Georges, Bermuda consisted of:

200 Sacks Saltpeter
200 Cases Rifles
202 Coils Rope
5 Bls Bagging
19 " "
50 " "
106 " Rope
25 Cases Eng^er Instrmts
3 " Sheet Copper
50 Pigs Lead
50 Bbls Copperas
14 " Salt
20 Kegs Soda
60 Bbls loaf Sugar
16 Bbls Salt
50 Cads Tea
30 half Chests
1 Case Quinine
1 Case Borax
208 _____ Oil
3 Cases Hand Cards
3 " " "
2 " " "
1 " " "
2 " " "
2 " " "
1 " " "
1 " " "[86]

In December 1864, the steamers *Ella* and *Agnes C. Fry* were chased aground attempting to enter Old Inlet and Confederate artillery frustrated Union efforts to destroy both vessels.[87] The *Ella*, aground on Marshall Shoal, was under the guns of both Fort Caswell and Fort Holmes. The *Agnes E. Fry* was chased ashore on Oak Island near the remains of the *Georgiana McCaw*. The *Ella* was salvaged by Confederates from Fort Holmes on Smith Island and the *Agnes E. Fry* was salvaged by the garrison at Fort Caswell.[88] Material

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83 *Wilmington Daily Journal*, 3 October 1863, p. 3, col. 3.
84 S. P. Lee to G. Welles, 10 January 1864, *ORN*, I, 9, pp. 385-386.
85 W. G. Saltonstall to S. P. Lee, 2 February 1864, *ORN*, I, 9, pp. 436-437.
86 Bermuda Customs, Out-bound, St. Georges, *Ranger*, 2 December 1863 , BA.
87 T. C. Dunn to G. W. Young, 3 December 1863, *ORN*, I, 11, p. 127.
88 B. Bragg to R. F. Pinkney, 29 December 1864, *ORN*, I, 11, p. 788.

salvaged from the *Ella* was auctioned by the Wilmington Port Warden for the benefit of the owners and salvors on 5 January 1865. The auctioned cargo included:

530 pieces dark, fancy and mourning Prints
86 " bleached Shirtings
161 dozen Half Hose--assorted,
20 pieces black Alpaca,
20 " Alpaca--assorted colors
12 " Alpaca Lustre,
13 " Maroon Stripes
20 dozen Linen Cambric Handkerchiefs,
110 pieces Paper Cambric--assorted colors,
6 " black Broad Cloth,
16 " Grey Cloth,
6 " Tweeds,
48 rolls Ribbon,
19 black Lace Mantillas,
200 dozen Coats' Spool Cotton,
50 gross Agate Buttons,
130 packs Pins,
39 dozen Dressing Combs,
8 " Merino Drawers,
150 lbs. Flax Thread, B & W
20 Letter Copying Books,
74 dozen Fr Waxed Calf Skins,
56 " Goat Skins
20 " Chamois Skins
20 sides extra Sole Leather.
30 boxes Adamantine Candles
27 " Brown Soap
33 " Brown Windsor Soap
7 chests Tea
5 bags Coffee
10 bags Pepper
7 cases White Wine Vinegar, 1 dozen each
1 case Cheese
2,000 lbs. Cotton Card Wire

AND

Immediately thereafter, the following sound goods, received by recent arrivals:
3 cases Black Flax Thread, 1,600 lbs.
5 " Clark's Spool Cotton, 2000 dozen
1 " Agate Buttons 85 gt gross
2 " White Bone Buttons, 90 gt gross
7 " Military Buttons
2500 pairs heavy Brogans
5 cases Head Stalls, Girths and Buckles
10 bales Twine
3 cases Cotton Cards

Because the *Ella* and *Agnes E. Fry* cleared from Nassau no customs records are available to shed more specific light on their cargos.

When the *Stormy Petrel* went ashore in December 1864, it was on the south breaker on Caroline Shoals. The wreck was within the limits of Fort Fisher's protection but was also within range of the Union blockaders. Although they could not destroy the *Stormy Petrel,* they shelled the steamer until they were driven away by the fort's artillery. The following day Power, Low and Company sent down 50 blacks to assist the garrison in recovering the *Stormy Petrel*'s cargo.[89] Unfortunately a northeast gale prevented salvaging material from the wreck and the steamer was beaten to pieces in heavy surf. The cargo of the *Stormy Petrel* was recorded as "647 Packages Merchandise" at Hamilton, Bermuda on 24 September 1864 and 498 Packages Merchandize" at St. Georges on 2 November 1864.[90] Although most of the freight aboard the steamer was destroyed, Colonel Lamb dispatched two boats to recover cloth from the wreck on 14 December. They returned filled with material for the garrison. The *Stormy Petrel* would be the last blockade runner to go aground under the protection of Fort Fisher.[91]

Both the archaeological and historical evidence confirms that the cargos of most blockade runners were either destroyed or extensively salvaged. For those vessels that made their final voyage from Nassau there is little if any historical documentation of the cargos. Virtually all of the Nassau Customs records were destroyed by devastating hurricanes early in the twentieth century. The Bermuda Customs records provide some insight into the exact nature of material being shipped through the blockade. However, in most of the records efforts to disguise outbound Anglo-Confederate commerce that might violate British Neutrality are apparent.

One of the most detailed exceptions in the St. Georges Customs records was the steamer *Bermuda* which entered on 22 March 1862.[92] The cargo of that vessel was documented in detail. According to the declaration, the *Bermuda* carried:

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89 Colonel William Lamb Diary, 8 December 1864, College of William and Mary.
90 Bermuda Customs, Out-bound, Hamilton, *Stormy Petrel*, 24 September 1864, BA and Bermuda Customs, Out-bound, St. Georges, *Stormy Petrel* 2 November 1864, BA.
91 Colonel Lamb's Diary, 7, 8, 9 and 14 December 1864, College of William and Mary.
92 Bermuda Customs, Out-bound, St.Georges, *Bermuda,* 22 March 1862, BA.

1 Case Leather
1 Case Haberdashery
1 Case Leather
1 Case Haberdashery
3 Bales Web
1 Bale Thread
5 Casks Saddelery
2 Case Leather
1 Case Hosiery
1 case Hosiery
5 Case Millenery
7 Case Print Materials
6 Case Stationary
5 Casks Stationary
2 Casks Stationary
1 Cask Stationary
1 Bale Woollens
1 Case -Ditto-
4 Bales -Ditto-
12 Casks Cottons
2 Bales Woollens
6 Cases Small Wares &c
3 Bales Woollens
1 Case -Do----
7 Ditto Cotton Thread &c
1 Ditto Hosiery &c
2 Bales Woollens
1 Bale Paste Boards
1 Case Small Wares
9 Casks Drugs
30 Bags Cutch
6 Casks (In transit)
6 -"- Hardware
2 Bales Sheeting
1 Cask Kidd Gloves
10 Case Shirting
1 Bale Cottons
1 Case Woollens

1 Case Shoes
2 Casks Porcelain
1 Case --Do----
1 Case Perfumery
5 Boxes cards
1 Case Teasels
2 Casks Bichrome
8 Bales Woollens
1 Truss Wool Braid
7 Bales Woollens
1 Case Needles
1 Case Pencils &c
24 Casks Hardware
2 Cases Haberdashery
3 Cases Haberdashery
1 Cases Haberdashery
2 " Hardware
100 Bundles Shoes
11 Cases Paper
14 " Soap
3 Bales Woollens
5 Cases Shot
1 Case Stationary
14 Cases Surgical Instruments
7 Casks -Do-
1 Case Haberdashery
7 Hhds Drugs
1 Tierce "
12 Casks "
27 Cases "
1 Cask "
26 Cask or Cases Drugs
4 Bales Woollens
5 Cases Cottons
2 Cases Cotton Thread
15 Bales Cottons

2 Cases Woollens
5 -Do- Cottons
10 -Do- Cotton Thread
13 " Cottons
8 " Woollens
53 " Cotton
3 " Hardwars Buttons &c
15 " flaxes
1 Linen Thread
2 Bales Woolens
5 " "

1 " Blankets

1 Case Print Materials
1 Package do
2 Case do
19 Cases do
26 --"-- Paper
1 ---"-- Ink
1 ---"-- Machinery
9 ---"-- Print Materials
14 Ingots Block Tin
16 Cases Hosiery
12 " Print Materials

4 Cases Pistols

250 Cases Shell
2 Cases Copper Tube Fuses
1 Cannon (loose)
100 Cases Shell
120 --"-- Do-

18 --"-- Do
41 --"-- Do
1 Case Fuses
1 " Howitzer

2 Cases}Gun Carriage

2 " "

16 Boxes Linen Thread

70 Bales Woollens
2 -Do- Blankets
38 " "

1 " Woollens
20 " Blankets
1 Truss Samples
6 Cases Miltary Caps
5 Drums *** Cable
1 Box join Tools
1 Bale Woollens
4 Cases Shoe Thread
1 Cask Hardware
6 Cases Guns
3 Cases Hardware
2 Casks "
1 Case "
3 Casks
4 Cases Steel
1 Case Hardware
24 Bundles ***
3 *** Misc Cloth
2 Bales Basils
1 Roll Misc Cloth
1 Cask Hardware
1 Box Do
2 " Cotton Thread
2 Trusses Haberdashery
14 Hhds Hose Piping
10 Bales Canvas
2 Coils Rope
4 Coiled Hawsers

208 Coils Manilla Rope

240 Cases Boots
5 Loose Pieces}Machine
12 " Leggings
64 Bales Hides
1723 Sides Leather

250 " "
1200 Boxes Glass

10 Chest Tea
20 Boxes -Do-
6 Half Chests -Do-
25 Boxes -Do-
4 Half Chests
94 Bags Coffee
122 -Do- -Do-
32 -Do- -Do-
67 -Do- -Do
25 -Do- -Do-
712 Bags Saltpetre
3 Barrels Bar Tin
5 " Ingots "
128 Ingots "
35 Pigs Lead
8 Bundles Iron
35 " Sheet "
200 Boxes Tin plates
100 Do *** plates
10 Bundles Iron Misc
3 Cases Cannon
1 " Do
1 " Carriage
60 " Shell
20 " Do[93]

4 Loose Pieces}

3 Cases}Reply

1 Cannon (Loose)
1 " "

7 Field Carriages
{2 Timbers
2 Bundles ****

2 Cases Cannon
2 " "
14 " Swords
3 " -Do-
47 " -Do-
70 Bbls Cartridges

300 Bbls Gun Powder
76 Half Bbls
177 Gr " "
170 " " "
2 Half Bbls "

6 Gr: " "
47Cases Merchandize
5 Bales "
1 Case "

1 Box "

7 Cases "

The *Bermuda* was captured on the voyage from Bermuda to Wilmington. After the vessel was turned over to the New York Prize Court, the cargo was inventoried and a very detailed record prepared for the court and auction. That inventory provided considerable insight into the contents of each of the kegs, casks, boxes and containers in the Bermuda Customs declaration.

The New York Prize court inventory identified the tea on the Bermuda Customs declaration as Chinese "Oolong," "Hyson," "Hyson Oolong," and "Canton Finest Gunpowder" teas. Bales of woolens listed in the Bermuda Customs inventory were identified as "White Blankets" of varying weights

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[93]Bermuda Customs, In-bound, St.Georges, *Bermuda*, 4 November 1863, BA.

from 4.5 to 6.5 ounces and dimensions such as 72 by 77 inches. Another case contained lots of 2 to 60 dozen grey, white and black ladies and brown, black and white mens stockings. Several casks of "Merchandize" contained 242 axes and 20 dozen 6 inch Planters Hoes and 20 $^{11/12}$ dozen 5 $^{1/2}$ inch Planters Hoes. Another case was broken down into dozens of ladies, gentlemens and girls gloves of various sizes and colors. A case of stationary was broken down into 80 reams of blue and white, plain and slick letter paper.[94]

One cask of hardware was inventoried and contained:

240 doz. Table Cutlery
120 doz. Table Cutlery
8 doz. Sheep Shears
8 doz. Sheep Shears
6 doz. Razors
6 doz. Razors
14 doz. Razors
6 doz. Beauregard Knives
6 doz. Davis Knives
6 doz. Davis Knives
6 doz. Beauregard Knives
12 doz. Bull's Run Knives
12 doz. Bull's Run Knives
11 $^{1/2}$ doz. Bull's Run Knives

Knives listed as Beauregard Knives, Davis Knives and Bull's Run Knives were likely side knives manufactured in the "Bowie" style with acid etched blades honoring Confederate General P. G. T. Beaureguard, President Jefferson Davis and commemorating the Confederate victory at the battle of Bull Run in northern Virginia in 1862.[95] The cargo of the *Modern Greece* contained a shipment of side knives produced a decade before the Civil War to commemorate the California Gold Rush.

The contents of another case, one of six identified as "In Transit" in the Bermuda Customs manifest contained several hundred "Line Officers Swords" and scabbards, dozens of pairs of "Gilt Epaulets," "Gilt Emb^{d} Bugles," "Gold Emb^{d} Sabers" and "Crimson Silk Sashes." Another cask listed as drugs in Bermuda was broken down into "4 Jars Ginger, 2 Jars Blue Pills, 2 Jars Hemlock extract, 1 Jar Jalap Extract" and two packages one containing 31 bottles of

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94Inventory of the Cargo of the Steamer *Bermuda*, New York Prize Court Records, RG 21, NA, Bayonne, New Jersey.
95*Ibid.*

Morphine and the other containing 46 bottles. A second cask included in the lot contained "4 Jars powdered Rhubarb, 4 Jars Mercurial Ointment, 8 Cans Spice Root, 2 bottles Citreate Quinine, and 1 bottle Bismuth sub. carb." Ten cases shipped on the *Bermuda* contained packages of Brown Windsor soap.[96]

A lot of twelve cases contained from 40 to 56 reams of "Bank Note" paper water lined C. S. A. and produced by the firm of Wiggins Teak and Company. Another lot included ink for bank notes and several contained the tools and supplies for engravers. Other cases contained "26 gross Tooth Brushes," 252 cane and bone umbrellas, an assortment of buttons of bone, wood, pearl, agate and metal, military gilt buttons with the Palmetto insignia of South Carolina, packages of "Taylor London pins," neck ties and "Cotton Velvet Ribbons."[97]

The *Robert E. Lee,* a Confederate government owned vessel, cleared St. Georges on 4 November 1863 with a cargo listed as:

145 Cases Arms
29 Bbls Pork
1 Box Bacon
90 Sacks Saltpetre
28 Pigs Lead
160 Sacks Saltpetre
372 Pigs Lead
8 Packages Mdze
1 Case Wire Rope
1 puncheon Rum[98]

After the *Robert E. Lee* was captured on 9 November 1963, the United States District Court of Massachusetts provided a much more comprehensive inventory that included:

13 Pig Lead
251 Bags Saltpetre
22 Barrels Salt-Beef
39 " " Pork
1 Coil Wire Rope 25 ft
150 Cases Austrian Muskets
30 Bales Blankets
3 Bales Army Blankets
52 Cases Boots & Shoes
1 Case Dry Goods & Clothing

2 Sextants
2 Quadrants
2 Chronometers
1 Writing Desk
1 Electrical Machine
2 Spy Glasses
1 Patent Log
1 Lot Knives Forks
4 Compasses
1 Lot Signal flags

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96 *Ibid.*
97 *Ibid.*
98 Bermuda Customs, Out-bound, St.Georges, *Robert E. Lee,* 22 March 1862, BA.

1 Case Clothing
1 Bale Dry Goods
26 Large Cases Blankets
25 Large Cases Boots & Shoes
Stores & Sundries
1 Lot Dry Goods including pieces of cotton-woolen & linen also flannel & prints
1 Trunk fancy Goods-Button spool cotton *** & needles
2 Boxes Stationary
1 Trunk Stationary
1 Box Pocket Knives & Hardware
1 " Childrens Books
1 Lot Leather
1 Empty Trunk
1 Trunk containing pieces silk linen & Alpaca goods
1 Lot Carpeting & wool
1 Lot Tin Ware
1 " Crockery & Glassware
4 Boxes Vermicelli
2 Boxes Medicine Chest
2 Aherord Barometers, 1 Broken
1 Time Piece
1 Artificial Horizon

1 " Starch
1 " Indigo
1 " Newspapers
1 " Drugs & Medicines
1 " Sewing Twine
1 " Blue Signal lights

1 Engineers Instrument
1 Lot Tea

1 " Bedding
1 " Charts
1 " Hoop Skirts

1 " Clothing
1 " Pickles & Preserves
1 " Spices
1 " Preserved Meats

1 Case Boots & Shoes
1 Basket do do
1 Case do do
1 Bag Almonds
1 Tool Chest & Tools
2 Boxes Preserved Lobsters
1 " Smoked Salmon[99]

On 21 November 1863, the steel steamer *Banshee* was captured heading for Wilmington by the USS *Montgomery*. *Banshee* was owned by the Anglo-Confederate Trading Company and had a cargo consisting almost entirely of civilian goods. While no customs declaration survives from Nassau, the New York Prize Court inventory provides a highly detailed record. The inventory prepared for the N. Y. Prize Court included:

1 Bale Bleached Shirting
1 Case Mozambiques Shirting
1 " Chino Alpaca
1 Bale Bremen Cassmeres
1 Bale Tweeds
9 Cases Grey Twilled Flannel
4 Bales " "
1 Bale White *** Flannel
1 Bale Red Flannel
1 Bale Long Cloth Flannel
1 Pkg linen Diaper

1 " *** Hydrag
1 " Quinine
5 Kegs Bi Carb Soda
2 Cases ****
1 Case ass. Screws
1 Cask ass. Files
1 " Boston "
1 " " "
1 " " "
1 " Second Cut Files
1 " Files

99Inventory of the Cargo of the Steamer *Robert E. Lee*, New York Prize Court Records, RG 21, NA, Bayonne, New Jersey.

1 Case Sundries
1 " "
1 " "
1 " "
1 " "
1 " "
1 " "
1 Trunk "
1 Case "
2 " Buttons
1 " "
1 " "
1 " Congress Gaitors
1 " "
1 " "
1 " "
1 " "
1 " "
1 " Neopolitan Shoes
1 " Gaiters
1 " Neopolitan
1 " Congress Gaitors
13 Cases misses Brogans
6 " Men's "
15 " " "
6 " " "
6 " **** Boots
1 " Balmoral Shoes
2 " Congress Gaiters
1 " *** Hats
1 " " "
3 " Garden Hose
1 Case Matches
10 Bales Gunning Cloth
100 Coils Logging Rope
2 Bales Twine
3 Cases Letter Paper
1 " " "
1 " " "
1 " " Books
297 Bags Rio Coffee
14 Bags Coffee
1 Box "
1 Bag Pepper
2 Bbls *** Sugar
1 " Brown "
1 Case Sundries
1 " "
12 Pkg "
1 Box Cheese
100 " Bacon
100 Bbls Whiskey
1 Case Brandy
2 " Blankenheizm Gin
3 Bbls Ale
2 Bbls Port**
1 Pkg ass. Postman Packig Books
1 Case Sundries
1 " "
13 Kegs Soda
40 " Salt Peter[100]

An examination of the auction records associated with the cargo of the *Banshee* provides unique insight into the exact nature of many of the unidentified containers listed in the prize court inventory. Each container was opened, inventoried and the contents published in the auction catalog along with the name of the consignee where that was available. Containers were marked for such individuals as North Carolina Governor Zebulon B. Vance, South Carolina merchant and shipowner James E. Adger, Confederate Secretary of the Treasury Christopher G. Memminger and blockade runner Captain Jonathon Steele.

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[100] *Ibid.*

A case shipped to Governor Vance included the following articles:

1 ps blk Barege 72 in	11 yds
1 ps do 25 in	16 yds
4 ps white and blk printed Lawns	48 yds
3 ps mourning Prints	35 yds
1 ps mourning Ginghams	10 yds
1 ps dark Print	20 yds
4 ps light Prints	8 yds
2 ps white Cambric 36 in	10 yds
10 yds blk Cambric	
1 yd blk Crape	
1 doz blk cotton Hose	
3 pr spun silk Hose	
3 Hoop Skirts	
1 blk moire antique Parasol	
2 boxes Sundries	
6 pr ladies lasting side L Gaiters	
6 pr do Slippers	
6 pr childrens Shoes and Gaiters[101]	

James E. Adger, Charleston merchant and ship owner, was to have received a large case that contained a variety of expensive material, clothes, medicine and other articles. Adger's case contained:

1 ps Long Cloth	41 1/2 yds	7 cotton Handkerchiefs
1 ps grey Tweeds	10 1/2 yds	1 doz ladies cotton Handkerchiefs
2 ps white Flannel	21 1/2 yds	7 doz ladies linen Handkerchiefs
1 ps Angola do	8 yds	16 doz Brooks Spool Cotton
1 ps Canton do	68 yds	3 lbs Linen Thread
1 ps dbl twilled do	10 yds	2 doz white cotton Tapes
1 ps red do	40 yds	1 doz worsted Stay Lacets
4 ps mixed do	28 yds	1 lb Pins
2 ps purple Prints	32 yds	4 gro agate Buttons
2 ps Irish Linen	55 yds	1 gro blk bone suspender Buttons
1 ps Birds Eys Diaper	10 yds	1 doz fine horn Combs
1 fancy Dentin Dress		10 Tooth Brushes
8 yds brown Linen		1 doz fey Soap
6 yds Hair Card Prints		18 pr asstd ladies misses & boys Shoes
10 yds Frence Marine		3 pr calf Boot Legs complete
5 yds paper Cambric		6 pr do Fronts for footing
21 yds brown Holland		25 lbs Sole Leather
40 yds Mohair Lastre		3 Calf Skins
6 cotton Under Shirts		1 1/2 lbs Shoe Thread
4 doz ladies white Cotton Hose		1 piece silk Gore for gaiters 8 yds
1 doz mens do		4 leather Belts
1 doz misses brown do		2 felt Hats

101Catalog of Cargo of Prize Steamer "BANSHEE," filed with New York Prize Court Records, RG 21, NA, Bayonne, New Jersey.

3-12 doz boys mixed do
4-12 doz misses cotton Hose
12-12 doz cotton bk Hose
5-12 doz childrns wht cotton Socks
3 Angola Saxon Shirts
4 spun silk Shirts
2 Shetland Shirts
2 cotton Umbrellas

1 lb green & black Tea
1 oz Pellateers Quinine
2 small bottles calcined Magnesia
1 bottle Oxmel Scilla 8 oz
1 small Argent Nit
4 oz best root Rhubarb
1 6 oz bottle Laudenum
1 8 oz bottle Paregaree
2 lbs Ep's Salts[102]

Confederate Secretary of the Treasury Christopher G. Memminger's material consisted of a box containing 140 pounds of coffee from Santo Domingo, a 185 pound barrel of crushed sugar and a case of 7 bottles of brandy. Captain Jonathon Steele's modest shipment included:

1 ps brown Shirtings 35 in 36 yds
1 ps blea long Cloth 35 in 43 1/2 yds
1 ps blk Bombazine 5 qrs 10 yds
1 soft Hat
6 hair Brushes
2 1/4-lb bottles calcined Magnesia
1 lb Cloves
2 lb Mace
1/2 box Raisins[103]

By the fall of 1863, Confederate officials were considering regulation of blockade running. Loans based on cotton warrants had to be heavily discounted to be attractive as cotton was to be delivered at Confederate ports and had to be run through the blockade at the owners risk.[104] In October C. J. McRae suggested a plan for restructuring Confederate credit and purchasing in Europe. McRea's plan called for five dramatic steps:

> First. To revoke or annul all contracts in Europe, in which profits or commissions are allowed, whether they be with agents, contractors, or partners.
>
> Second. That there should be one contracting or purchasing officer each for the War and Navy Departments in Europe....

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102 *Ibid.*
103 *Ibid.*
104 J. M. Mason to J.P. Benjamin, 5 Sept 1863, Richardson, *Messages and Papers of the Confederacy*, pp. 560-562.

Third. That there should be one general agent for Europe, who should have the entire control of the credit of the Government abroad, with large discretionary powers....

Fourth. That the government should take the exports and imports into its own hands, and no cotton, tobacco or naval stores should be allowed to leave the country except on Government account or for account of holders of produce bonds....

Fifth. To purchase or take possession of all of the cotton and tobacco in the country at a price to be fixed by act of Congress.[105]

Even before McRae's proposal arrived in Richmond, Confederate officials Davis, Seddon, Benjamin, Memminger and Mallory initiated plans to put a similar plan proposed by John Slidell into effect.[106] McRae was appointed to conduct Confederate business in Europe and the decision was made to export cotton to finance Anglo-Confederate trade. The success of the Ordnance Bureau, War Department and Navy Department in running munitions and war material through the blockade provided an example for Confederate control of the trade. McRae pointed out in his 7 October letter to Memminger "that the Government can successfully run the blockade is conclusively proven by the experiment of Maj. Caleb Huse, of the Ordnance Department, who put on four boats between Wilmington and Bermuda in February and march last with funds obtained mainly on the credit of cotton the boats were to bring out, which boats made twenty-two successful trips by the 1st of August and without a single loss."[107]

In his 26 November 1863 report to President Davis, Secretary of War Seddon confirmed the success of government blockade running. According to Seddon:

> The steamers owned by the Department, four in number, were for a long time run between Wilmington and the islands with signal success and almost the regularity of packets. The profits by the outward and the saving by the inward trips to the Department were very great, as at each trip, according to the current rates, the

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105 McRae to Memminger, 7 October 1863, p. 983, *ORA*, IV, 2, 126 and Pickett Papers, Slidell to Benjamin, No. 37, 12 June 1863, NA.

106 Slidell to Benjamin, No. 37, 12 June 1863.

107 McRae to Memminger, 7 October 1863, *ORA*, IV, 126, pp. 983-985.

> value of the vessel was fully reimbursed. It is a moderate calculation to estimate the gain thus effected for the Department as upward of twenty millions of dollars in currency.[108]

Mason had suggested that the Confederate Government fit out a fleet of "fast steamers, for bringing out cotton on Government account" in a 6 August 1863 communication to Judah P. Benjamin.[109] Mason felt that as soon as cotton could be delivered to Nassau or Bermuda it could be delivered to Great Britain or Europe without additional war related risks.[110] Henry Hotze publisher of the Confederate newspaper *Index*, also recommended that the Confederacy adopt a "monopoly on blockade running" and control the importation of nonessential goods.[111]

The elements of McRae's plan were adopted and submitted to Jefferson Davis and his cabinet in January 1864 and "A bill to impose regulations upon the foreign commerce of the Confederate States to provide for the public defense" was introduced in the Confederate Congress that same month. The bill was passed by the House of Representatives and Senate before the end of January and was signed by Jefferson Davis on 6 February 1864.[112] That bill provided Davis with authority to regulate all of the Confederacy's foreign commerce.[113] The legislation spelled out the punishments for violation of the act and designated the Confederate agents and courts that would enforce and resolve litigation associated with the act. President Davis was given specific control over the exportation of cotton, tobacco, military and naval stores, sugar molasses and rice.[114]

"An Act to Prohibit the Importation of Luxuries, or of Articles Not Necessaries or of Common Use" was also passed on 6 February. That act specifically prohibited the importation of:

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108 Seddon to Davis, 26 November 1863, *ORA*, IV, 2, pp. 990-1018.

109 Mason to Benjamin, No. 43, 6 August 1863.

110 Mason to Benjamin , No. 45, 5 September 1863.

111 Hotze to Benjamin, No. 30, 3 October 1863 and Hotze to Benjamin, No. 34, 26 December 1863.

112 Acts and Resolutions of the Confederate States of America, mss. Library of Congress and "Statutes at Large of the Confederate States," 1861-1864, Richmond, 1864, XXIV, p. 81.

113 A Bill to impose regulations upon the foreign commerce of the Confederate States to provide for the public defense, *ORA*, IV, 3, pp. 80-82.

114 *Ibid.*

> Beer, ale and porter; muffs and tippets, and all other manufactures of fur, or of which fur shall be a component part, except caps and hats; carpets, carpetings, hearth rugs, bedsides, and other portions of carpeting, of any kind or description; carriages and parts of carriages; cider and other beverages not containing alcohol; clocks and parts of clocks; cotton insertings, cotton trimmings, or laces of thread and other material; coral, manufactured; dolls and toys of all kinds; fire-crackers, sky-rockets, Roman candles, and all similar articles used in pyrotechnics; furniture, cabinet and house-hold; glass, colored, stained or painted; India matting of all sorts; jet and manufactures of jet, and imitations thereof; jewelry or imitations thereof; manufactures and articles of marble, and marble paving tiles, slabs or blocks, and all other marble; matting, China, or other floor matting and mats made of flage, jute, or grass; paper hangings, paper for walls, and paper for screens or fire boards; paving and roofing tiles, and bricks, and roofing slates, and fire bricks; thread lastings and serge; velvets of all kinds.

Additional materials placed on the list of contraband included:

> Angora, Tibet, and other goats' hair or mohair, unmanufactured; bananas, cocoa nuts, plantains and oranges; cabinets of coins, medals, gems, and collections of antiques; diamonds, mosaics, gems, pearls, rubies, and other precious stones, and imitations thereof, set in gold or silver or other metal; engravings, bound or unbound; rattans and reeds; paintings and statuary; leaf and unmanufactured tobacco and cigars; or the following articles....Diamonds, cameos, mosaics, pearls, gems, rubies, and other precious stones, and imitations thereof when not set.[115]

On 5 March 1864, C. G. Memminger, James A. Seddon and Jefferson Davis approved regulations that put the Foreign Commerce Act into effect.[116] The regulations required vessel owners to declare their cargos and consent to providing the Confederacy one half of the vessel's tonnage for military necessities. Each vessel was to be bonded and the Confederate Government was to pay vessel owners for their portion of the cargo space at rates established by the government and paid in coin or sterling for outward cargos and in cotton for inward cargos. The regulations also required disclosure and approval of the vessel's officers and crew and of all passengers. Exemptions

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115*Wilmington Daily Journal*, 11 May 1864, p. 4, col. 2.

116Richardson, *Messages and Papers of the Confederacy*, pp. 417-420.

were made for vessels owned or operated by Confederate and state agencies and for vessels entering the Confederacy to take out cotton obligated by Confederate bonds, warrants and loans.[117]

The passage of legislation and promulgation of regulations designed to control blockade running stimulated an immediate response from the Anglo-Confederate trading community. James Randall, a Wilmington based clerk for one of the companies engaged in blockade running wrote on 10 March 1864 that:

> The blockade runners swear that they will not bring in a single cargo under the present arrangement viz one-half the cargo. It is unjust and extortionate. If the Govt. does not prove successful in running its own steamers it will suffer rather than gain by such a regulation.[118]

North Carolina Governor Z. B. Vance complained that due to the Confederate regulations "Wilmington is more effectively blockaded from within than without."[119] One member of the crew of the Confederate steamer *Coquette* wrote the *Wilmington Daily Journal* to complain of the situation created by the newly imposed regulations. That unidentified individual wrote:

> Some of us are in "the trade" not for the purpose of making money, seeing we receive only our regular pay as Government officers, and carry nothing except for Government, which unfortunately has made us no allowance for propitiating the municipals; and after struggling through the usual difficulties of intricate navigation, in dark nights, hard work, and anxious vigilance to escape Yankee cruisers, we get into a Confederate port to find, instead of welcome and aid, numerous annoyances, questioning our veracity and loyalty to our native country, and restrictions that almost prevent success in the undertaking.[120]

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117 *Ibid.*

118 J. Randall to K. Hammond, 10 March 1864, James Randall Papers, Southern Historical Collection, University of North Carolina.

119 *Wilmington Daily Journal*, 27 May 1864, p. 2, col. 2.

120 *Wilmington Daily Journal*, 21 June 1864, p. 2, col. 2.

In returning a bill designed to amend the 6 February 1864 Act to the House of Representatives, President Davis pointed out that he had remained steadfast in his belief in the necessity to control blockade running. He was satisfied that complaints and threats to withdraw vessels from blockade running were only an effort to test the government's resolve. The results:

> ....proved the correctness of the view, for, after various attempts to obtain increased advantages, the vessels resumed their voyages. Their number has been largely increased, the ability to export produce and import supplies on Government account has been developed to a greater extent than had been anticipated, and the credit of the Government has been so improved in foreign markets that the quotations for its loan have rapidly advanced.[121]

That opinion was confirmed by Secretary of War Seddon on 10 December 1864. Seddon wrote President Davis that he felt "the regulations have been beneficial to the Confederate States Government in furnishing the means abroad to purchase supplies and munitions of war and the tonnage required to transport them to our ports."[122] Seddon also agreed that the number of vessels engaged in blockade running had increased steadily since the regulations were promulgated.[123]

The impact of Confederate regulations can be seen in the nature of the cargos of vessels captured after March 1864. One of the first was the steamer *Caledonia*. *Caledonia* cleared Bermuda Customs at St. Georges with a nominal cargo consisting of:

47 Boxes Bacon
28 Casks Bacon
36 Cases Leather Goods
3 Cases Medical Stores
1 Keg Horse Shoe Nails
1 Case Merchandize[124]

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[121] J. Davis to the House of Representatives, 10 June 1864, Richardson, *Messages and Papers of the Confederacy*, pp. 466-470.
[122] Seddon to Davis, 10 December 1864, *ORA*, IV, 3, pp. 928-930.
[123] *Ibid.*
[124] Bermuda Customs, Outward, St. Georges, 11 April and 25 May 1864, BA.

The Boston Prize Court inventory confirms that the cargo was small and suggests that perhaps the 36 cases of leather goods were "Infantry Equipment." According to the Prize Court inventory and the report of Commander Pierce Crosby approximately half of the bacon and most of the leather goods were thrown overboard during the chase.[125]

The steamer *Thistle* was captured on 4 June 1864 by the USS *Fort Jackson* off Beaufort. During a 70 mile chase the crew of the blockade runner threw almost all of the cargo overboard.[126] At St. Georges the *Thistle* entered a cargo consisting of:

335 Pkgs: Machinery
101 Cases Mdze.
29 Coils Rope
29 Bbls: Ink
78 Pkgs: Machinery
25 do - do
3 Cases Mdze
1 Case Mdze
10 Bbls Copperass
1 Case Mdse[127]

When the *Thistle* was captured, B. F. Sands reported that the only part of the cargo left onboard was a cotton press. The Boston Prize Court inventory did not include the cotton press but listed the following as cargo:

21 Coils Manilla Rope
Lot Gas Pipes
Lot Steel
Lot Plate Iron
Lot Bar Iron
82 Cases Muskets
1 Case Carbine
4 Casks Oil
Lot Carriage Springs
" " Axles
1 Wood Jointing Machine
1 Surfacing "
1 Circular Sawing "
1 Scoll " "
1 Wood Boring "
1 " " & Mortising "

1 " Wine
18 Cases Brandy
1 " Wire Cloth
1 " Machine Cards
1 Box Files
1 Case Wrenches
1 " Carriage Trimmings
95 *** " Bolts
2646 " Screws
591 pr. Hinges
157 lbs. Copper Rivets
35 " Brass Eyelets
1 Case Mustard
2 " & 3 Cans Camphor
6 Bags & 1 Bbl. Coffee
6 Cases Blacking

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125 Inventory of property on the steamer *Caledonia*, 8 July 1864, U. S. Prize Court Records Boston, NA, Waltham, Massachusetts and P. Crosby to S. P. Lee, 30 May 1864, *ORN*, I, 10, pp 106-107.
126 B.F. Sands to S. P. Lee, 5 June 1864, *ORN*, I, 10, pp. 120-121.
127 Bermuda Customs, Outward, St. Georges, *Thistle*, 31 May 1864, BA.

1 Moulding "
Lot wood working "
1 Cask Rum
2 Cases Champagne
9 " Soap Powder
8 Bbls. Beef & Pork
11 " Copperas
Lot Crockery & Glass[128]

The *Little Ada* owed by the Importing and Exporting Company of Georgia was captured by the USS *Gettysburg* on 9 July 1864.[129] Unlike the *Caledonia* and *Thistle, Little Ada*'s cargo was not thrown overboard prior to capture. The Boston Prize Court inventory included the following as cargo:

125 Pigs Lead
249 Kegs Soda
12 Bales Hops
1 Cask Hoes
42 Barrels Epsom Salts
1 Barrel Alum
1 Case Do
1 Barrel Coffee
2 Bags Do
2 Barrels Sugar
1 Barrel Beef
5 Kegs Beef and Pork
6 Casks Liquor
1 Case Printers Ink
5 Cases Shirts, Hoseiry, Neck ties
3 Boxes Soap
5 Boxes Gin
2 Boxes Liquor
1 Box Cotton Cards
1 Case Testaments
1 Box Drugs & Medicines
1 " Dry Goods & Shoes
1 " " & Soap
1 " Sardines, Soap & Provisions
1 Box Ham & provisions
1 Box Champagne
1 " Sweet oil & ***[130]

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128 Inventory of property on the steamer *Thistle*, 11 July 1864, U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.
129 S. P. Lee to G. Welles, 5 August 1864, *ORN*, I, 10, pp. 245-246 and W. M. Gloin, 31 July 1864, *ORN*, I, 10, p. 246.
130 Inventory of property on the steamer *Little Ada*, 25 July 1864, U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.

Some of the material from the *Little Ada* included in the United States Marshal's Sale was clearly in violation of Confederate import regulations. That material consisted of a case of ladies' white cotton hose, a case of fancy ties, and three cases of fancy shirts.[131]

In July 1864, the steamers *Rouen* and *Boston* were also captured. The *Rouen* was owned by W. Patrick Campbell of St. Georges, Bermuda and cleared that port with a cargo consisting of the following material:

100 Cases Tea
100 Cases Hoop Iron
1 Case Mdze
1 Bals Mdze
100 Sacks Saltpetre
31 Cases Shoes
1 Bale Blankets
2 Casks Sugar
3 Casks Whiskey
8 Cases Brandy
5 Casks Wire
2 Cases Leather[132]

During a four hour chase by the USS *Keystone State,* most of the cargo was thrown overboard.[133] When the cargo was listed for sale by the U. S. Marshal in Boston it was apparent that most of the tea and saltpetre had been thrown overboard. The U. S. Marshal's Sale Catalog listed the following material from the ship's cargo:[134]

117 White Blankets
2 Cases and Contents
1 Case and Contents
1 Case 21 pr. ass'd Shoes
2 do 62 do do
4 do 400 do Brogans
5 do 500 do do
5 do 500 do do
20 do 90 1/2 doz. Calf-skins
1 Lot hoop Iron
1 Box Soap
1 do Castor Oil

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131 U. S. Marshal's Sale Catalog, Steamer *Little Ada*, 24 August 1864, included in U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.

132 Bermuda Customs, Outward, St. Georges, *Rouen*, 28 June 1864, BA.

133 P. Crosby to G. Welles, 2 July 1864, *ORN*, I, 10, pp. 223-224.

134 U. S. Marshal's Sale Catalog, Steamer *Rouen*, 24 August 1864, included in U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.

3 do Gin
1 do Brandy
7 do Wine
5 do Champagne
1 do Wine
1 do Sauces
1 do Machine cards
2 Casks Loaf Sugar
Lot P. Meats
1 Cask Spirits Terpentine[135]

Other material on the sale inventory included the ship's stores, equipment, navigation instruments, charts and supplies.

The cargo of the steamer *Boston*, owned by Francis W. J. Gurst, was listed at St. Georges as:[136]

24 Bbls Copperas
465 Sacks Salt
180 Boxes Soap

The U. S. Marshal's Sale inventory for the *Boston* included:

445 Bags Salt
24 Barrels of Copperas
179 Boxes Soap[137]

Other material on the auction inventory included the ship's stores, equipment, navigation instruments, charts and supplies.[138]

One of the last blockade runners to be captured was the steamer *Stag*. The *Stag* was owned by Fraser, Trenholm and Company and was one of several vessels purchased from Jones, Quiggin and Company for the Confederate States Government. When the vessel cleared at Bermuda on 26 January 1865, the St.

135*Ibid.*
136Bermuda Customs, Outward, St. Georges, *Rouen*, 2 July 1864, BA.
137U. S. Marshal's Sale Catalog, Steamer *Boston*, 24 August 1864, included in U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.
138U. S. Marshal's Sale Catalog, Steamer *Boston*, 24 August 1864, included in U. S. Prize Court Records Boston, NA, Waltham, Massachusetts.

Georges Customs declaration specified only "123 Pkgs Mdze reported in ward Entry of 13 January 1865 & Not take out of said Vessel here."[139] The Boston U. S. Marshal's Sale inventory included:

10 Pieces Red Marine Cloths
5 " Black *** "
5 " White ** "
10 Pieces Red do do
5 Pieces Blue do do
5 Pieces White do do
9 Pieces Red Do Do
5 Pieces White
5 Pieces Blue
6 Pieces Red *** Cloth
4 Pieces Blue " "
4 Pieces White
9 Pieces Red *** Cloth
4 Pieces Blue " "
5 Pieces White " "
Ten Bales Army Cloth
Ten Bales " "
Ten Bales " "
Ten Bales " "
Ten Bales " "
Nine Bales " "
120 Bales Black Thread
120 Bdls White * Brown Do.
130 Bdls Black Do.
49 Bdls White Linen Sailor Shirts
28 1/2 Bdls White Linen Sailor Pants
Fourteen Bales Army Blankets
Five Hhds Russet Shoes
Thirteen Cases Containing
Wood Strips for Shoe Pegs
Five Cases Containing
4 Sewing Machines & Features for the Manufacturing of Shoes and Harnesses
2 Large Eylet Machines for the Manufacturing of Shoes Harnesses
10 Packages of 10 Boxes Ea. French Eylets

6 Cases Containing Cotton Machinery
1 Large Cases Containing Cotton Machinery
15 Bdls. French Laces
Three Boxes Honey Soap
One Box Containing
Sunday School Books
One Box Containing
6 Bottles Cordials

12 lbs Adams Candles
10 " Currants
12 " Starch
2 lbs Filberts
2 lbs Indigo
3 lbs Candied Lemon Peel
1/2 Box Raisins
1 Paper Black Lead
1 Scrubbing Brush
1 Shoe Brush
6 Bottles Currant Jam
4 Small Boxes Potted Tongues
Two Half Boxes Raisins
2 Paper's Starch, 14 lbs
1 Small Box do, 5 "
49 Boxes Sardines
1 Bottle Ground Pepper
50 lbs Cracked Sugar
3 " Almonds
6 Pt Bottles Cologne
1 Iron Saucepan
15 Mens Soft Hats
2 Dozen Suspenders
6 lbs Gross Bone Buttons
42 Mens Soft Hats
5 1/2 Dozen Suspenders
3 1/2 Gross Small Gilt Army Buttons
5 Pieces Fancy Tweeds
5 Pieces Fancy Cassimeres
91 Dozen Fine Buffalo Combs
63 " Dressing " "
24 " " " "
14 " " " "
24 " " " "
3 Gross Gilt Army Buttons
110 Doz Children & Misses Hair *** Asst. Col.
30 Cases Enfield Rifles
20 in Each: Total: 600
34 Pigs Lead
Estimated Weight 125 lb ea. Total: 4250 lbs.
One Truss White **** Sugar
Ones Truss White **** Sugar
One Keg Pickled Tongues
One Hundred & Thirty Bags St. Petre

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139 Bermuda Customs, Outward, St. Georges, *Deer*, 26 January 1865, BA.

12 Small Rds English Cheese
60 lbs Hulls Sons Soap
5 lbs Almonds

Estimated Weight 150 lb Ea. 19,500 lbs.
One Hundred & Fifty Tons
(More or less) Cardiff Coal[140]

While extensive information on the nature of cargos does not appear to be preserved in the archaeological record associated with sunken blockade runners, untapped historical sources can supply new information concerning the specifics of that clandestine trade. Information preserved in the archaeological, historical and Prize Court records also suggest that the cargos quickly became the most important financial consideration. The distribution of wrecked blockade runners suggest that, as the war progressed, running the vessel ashore under Confederate guns where the cargo could be unloaded was considered a viable option. The clustering of wrecks at Masonboro Inlet, Carolina Beach Inlet, off Flag Pond Battery, off Oak Island Battery and at Lockwoods Folly Inlet suggests that the presence of Confederate troops and artillery was a serious attraction. Confederates proved to be very adapt at salvaging material from the remains of wrecked blockade runners and a salvaged cargo could easily pay for the cost of the vessel and its cargo.

An examination of the values of cargos auctioned by the United States Prize Court at Boston, New York, Philadelphia and Key West supports the theory that by 1863, the cargo had become so much more valuable than the vessel that the vessel could be considered expendable. One round trip would more than pay for the entire expense of a blockade running joint venture. All additional trips through the blockade generated excessive profits.

Examination of an inventory of vessels adjudicated by the United States Prize Courts provides additional evidence that the value of the cargos frequently exceeded the cost of the vessel. The following table provides an indication of the gross proceeds realized from the auction of blockade runners and their cargos. The value of the vessel has been determined by the amount received at auction or paid by the United States Navy.[141]

140Cargo of the Steamer *Stag*, New York Prize Court Inventory, Prize Court Records, RG 84, NA, Bayonne, New Jersey.
141 "Purchased Vessels" inventory of vessels purchased by the U. S. Navy Department, RG 45, Box 124, AY 1860-1870, NA.

Vessel	Date Captured	Adjudicated Amount	Vessel Amount	Cargo Amount
1862				
Settin	24 May 1862	226,393.10	50,000.00	176,393.10
Cambria	26 May 1862	191,424.54	72,579.44	118,845.10
Patras	27 May 1862	90,188.89	31,401.25	58,787.64
Lodona	4 August 1862	246,651.32	80,000.00	166,651.32
Memphis	31 July 1862	543,495.15	103,000.00	440,495.15
Banshee	21 November 1862	111,216.65	72,500.00	38,716.65
1863				
Antona	6 January 1863	126,390.65	55,130.00	71,260.65
Princess Royal	29 January 1863	359,535.33	112,000.00	247,535.33
Granite City	22 March 1863	68,829.81	55,000.00	13,829.81
Aries	28 March 1863	147,008.46	100,000.00	47,008.46
Gertrude	16 April 1863	88,987.60	45,000.00	43,987.60
Bermuda	27 April 1863	447,015.40	120,000.00	327,015.40
Eugenie	6 May 1863	24,239.67	20,000.00	4,239.67
Cherokee	8 May 1863	151,507.02	75,000	76,507.02
Calypso	11 June 1863	80,265.03	48, 500.00	31,765.03
Neptune	14 June 1863	40,820.58	40,000.00	820.58
Annie Childs	21 June 1863	106,008.11	65,000.00	41,008.11
Britannia	25 June 1863	173,670.55	52,000.00	121,670.55
Merrimac	24 July 1863	202,741.16	65,000.00	137,741.16
Columbia	3 August 1863	151,523.20	66,000.00	85,523.20
Margaret & Jessie	5 November 1863	170,708.34	90,000.00	80,708.34
Robert E. Lee	9 November 1863	122,331.11	73,000.00	$49,331.11
1864				
Greyhound	10 May 1864	497,858.55	40,610.00	457,248.55
Tristram Shandy	15 May 1864	418,873.81	58,000.00	360,873.81
Donegal	6 June 1864	140,000.00	89,000.00	51,000.00
Lilian	24 August 1864	327,507.35	140,000.00	187,507.35
A. D. Vance	10 September 1864	288,286.49	120,000.00	168,286.49
Lady Sterling	28 October 1864	509,354.64	135,000.00	374,354.64

The relative value of the inbound and outbound cargos was well established by the summer of 1862. The vessels of Z. C. Pearson provided a clear indication of the financial relationship between the vessel and its cargo. Ships like the *Settin, Patras, Lodona* and *Peterhoff* were clearly valued at less than half the cargo each carried. The *Lodona* was sold to the Navy for $80,000.00 while the cargo brought $166,651.32 at auction. While the *Patras* was

sold to the U. S. Navy for $31,401.25 the cargo brought $58,787.64.[142] The cargo of the steamer *Settin* was sold for $176,393.10 and the vessel was purchased for $50,000.00 by the Navy. The screw steamer *Columbia*, owned by Thomas S. Begbie was captured by the *Santiago de Cuba* on 3 August 1862 with almost all of her cargo intact. At auction in Key West the cargo sold for $85,523.20 while the vessel was purchased by the Navy Department for $66,000.00.[143] The implications must have been clear. Rather than risk capture and total loss, the vessel could be run ashore and the cargo discharged and sold. Even at auction damaged goods could be sold and sufficient revenues generated to cover the cost of the enterprise. Successful salvage of the Pearson steamer *Modern Greece* effectively illustrated that point. Under the direction of Colonel Leventhorp a "large quantity of arms" were reported salvaged and Colonel Leventhorp reported that with good weather he could save the remaining cargo and possibly the vessel itself. The *Wilmington Daily Journal* confirmed that Colonel Leventhorp was successful in recovering virtually all of the cargo.[144] The following advertisement announced the sale of material from the wreck:

AUCTION SALE
BY WILKES MORRIS, AUCTIONEER,
CARGO SALE AT AUCTION BY THE
PACKAGE.
Per Steamship "Modern Greece" direct from London
ON TUESDAY NEXT, 8th inst., at 11 o'clock, A. M.,
I will sell at No. 2, Granite Row,
THE ENTIRE CARGO (900 TONS) OF STEAMSHIP
MODERN GREECE
Reserving such articles as may be required by the Government,
This is one of the most valuable Cargos ever imported into the Southern Confederacy, and consists of

CASES DRY GOODS;
CASKS HARDWARE;
CASES BOOTS AND SHOES;
BALES BLANKETS;
CASES READY-MADE CLOTHING;

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142 Prizes adjudicated from the commencement of the rebellion, *Report of the Secretary of the Navy, 1864*, Government Printing Office, Washington, D. C., pp. 733-750.
143 Prizes adjudicated from the commencement of the rebellion, *Report of the Secretary of the Navy*, 1864, Government Printing Office, Washington, D. C., pp. 733-750 and "Purchased Vessels" inventory of vessels purchased by the U. S. Navy Department, RG 45, Box 124, AY 1860-1870, NA.
144 *Wilmington Daily Journal*, 28 June 1862, p. 2, col. 2.

CASES UNDER SHIRTS;
BALES SHIRTS;
CASES FELT HATS;
BAGS PEPPER;
BAGS PIMENTO;
KEGS BI-CARB. SODA;
KEGS SODA ASH;
CASES MUSTARD;
DRUGS AND MEDICINES;
BLACK LEAD;
GUNNY BAGS;
SACKS SALT;
QR. CASKS RED WINE;
QR. CASKS WHITE WINE;
HHDS. CHOICE SCOTCH WHISKEY;
CASES SAUTERINE;
CASES CLARET;
CASES MARASCHINO;
CASES RED SPARKLING BURGUNDY;

With various other articles.

Damaged portion of cargo will be sold first.

Catalogues will be furnished as soon as quantity landed in order can be assertained.[145]

Additional material from the *Modern Greece* was listed in the following 29 July advertisement:

BY WILKES MORRIS, AUCTIONEER,
CLOSING SALES OF WINES, LIQUOR, & c.,
Fx "MODERN GREECE"

ON MONDAY, AUGUST 4th, I will sell at my office, No. 2 Granite Row, all the wines and Liquors saved from the steamship 'Modern Greece" viz:

40 CASKS OLD SCOTCH WHISKEY
20 CASKS PALE COGNAC BRANDY (very old)
20 CASKS DARK COGNAC BRANDY (very old)
30 CASKS PURE PORT WINE
100 CASES SCOTCH WHISKEY
100 CASES CHAMPAIGNE
20 CASES COGNAC BRANDY
5 CASES SPARKLING BURGUNDY
5 CASES MARACHINO
7 CASKS BALL AND LUMP BLACK LEAD
8 CASES MAGNESIA
5 CASKS EPSOM SALTS
20 KEGS BI.CARB SODA
400 LBS. CANISTER POWDER

With sundry other articles from the wreck.[146]

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145 *Wilmington Daily Journal*, 1 July 1862, p. 2, col. 5.
146 *Wilmington Daily Journal*, 29 July 1862, p. 3, col. 3.

Wilkes also advertised the auction of the *Modern Greece* for the Port Warden. That auction was to take place on 30 July on the beach near Fort Fisher. A steamer was chartered to take prospective bidders to examine the wreck and attend the auction. Material for sale included the "hull, spars, rigging, anchors and chains" but was sold on an as is-where is basis.[147]

When the steamer *Memphis* was captured on 31 July 1862, the outbound cargo was almost entirely cotton. At auction in New York it sold for a staggering $440,495.15.[148] The *Memphis* was purchased from the Prize Court by the U. S. Navy for an additional $103,000.00.[149] In the case of vessels outbound, a single cargo was as much as four times the value of the vessel. The steamers *Princess Royal*, captured on 29 January 1863, and the *Bermuda*, captured on 27 April 1863, provided additional evidence that the vessel was a nominal expense of the blockade running enterprise. The cargo of the *Princess Royal* sold for $247,535.33 and the cargo of *Bermuda* sold for 327,015.40.[150] The *Princess Royal* and *Bermuda* were both sold to the U. S. Navy for $112,000.00 and $120,000.00 respectively.[151]

Although smaller, faster vessels were employed in blockade running after the fall of 1862, the fiscal relationship between vessel and cargo only changed when blockade running captains initiated the practice of throwing cargo overboard to lighten the ship and prevent its capture. The steamer *Gertrude* was captured by the USS *Vanderbilt* on 16 April 1863. Before being captured, the crew of the *Gertrude* was able to throw over a substancial portion of the cargo. In spite of the undetermined amount of lost cargo, material from the *Gertrude* sold for $43,987.60, only $1,012.40 less than the established value of the vessel. The steamer *Calypso*, captured by the USS *Florida* on 11 June 1863,

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147 *Ibid.*

148 Prizes adjudicated from the commencement of the rebellion, *Report of the Secretary of the Navy*, 1864, Government Printing Office, Washington, D. C., pp. 733-750.

149 "Purchased Vessels" inventory of vessels purchased by the U. S.Navy Department, RG 45, Box 124, AY 1860-1870, NA.

150 "The Steamer *Bermuda* & Cargo" report of the Clerk on balence in Registry after deducting costs, 4 April 1866, Philadelphia Prize Court Records, NA, Philadelphia, Pennsylvania and Prizes adjudicated from the commencement of the rebellion, "Report of the Secretary of the Navy," 1864, pp. 733-750.

151 "Purchased Vessels" inventory of vessels purchased by the U. S. Navy Department, RG 45, Box 124, AY 1860-1870, NA.

was found to have thrown overboard an undetermined amount of cargo.[152] In spite of that, the remaining cargo sold at auction for $31,765.03 and the vessel sold to the Navy Department for $48,500.00.[153]

During November 1863, a number of blockade runners were captured. They included the *Margaret & Jessie* captured on 5 November 1863 by the USS *Nansemond* and USAT *Fulton*; the *Cornubia*, captured on 8 November by the USS *James Adger*; and *Robert E. Lee* was captured the following day by that same vessel. The steel paddle steamer *Banshee* was captured on 21 November by the USS *Grand Gulf* and USAT *Fulton*. All of those blockade runners had thrown cargo overboard prior to capture. At auction the cargo of the *Margaret & Jessie* sold for $80,708.34 while the vessel sold to the Navy Department for $90,000.00. *Cornubia* sold to the Navy for $99,000.00 and the remaining cargo brought $103,765.23. *Robert E. Lee* was sold to the Navy Department of $73,000.00 and the cargo brought $49,331.11 while the *Banshee* and cargo brought a total of $111,216.65. The vessel brought $72,500.00 from the Navy Department and the cargo was sold for $38,716.65.[154]

The trend for inbound vessels continued in 1864 and the outbound example set by the *Memphis* in 1862 was consistently repeated. The cotton from the *Merrimac* captured on 24 July 1863 was sold for $137,741.16 while the vessel brought only $65,000.00 from the Navy Department. The *Tristram Shandy* was captured on 15 May 1864 with a cargo of cotton that sold for $360,873.81. The vessel sold to the Navy for only $58,000.00. On 28 October 1864, the *Lady Sterling* was captured by the USS *Calypso* and *Eolus*. The vessel was purchased by the Navy Department from the New York Prize Court for $135,000.00 and the cargo of cotton and naval stores was auctioned for $374,354.64.[155]

Investigation of the remains of Civil War blockade runners suggests that only a limited amount of cargo survives in association with the wrecks of blockade runners. However, previously untapped historical sources like the Prize Court proceedings provide a highly detailed, and sometimes personal, record of the nature and scope of material being shipped through the blockade.

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152 J.P.Bankhead to S. P. Lee, 11 June 1863, ORN, I, 9, pp. 73-74.

153 "Purchased Vessels" inventory of vessels purchased by the U. S. Navy Department, RG 45, Box 124, AY 1860-1870, NA.

154 Prizes adjudicated from the commencement of the rebellion, "Report of the Secretary of the Navy", 1864, pp. 733-750 and "Purchased Vessels" inventory of vessels purchased by the U. S. Navy Department, RG 45, Box 124, AY 1860-1870, NA.

155 *Ibid.*

The example provided by this research suggests that additional examination of those records could shed important new light on the material carried by Anglo-Confederate blockade runners.

Chapter VIII Conclusions

Although local geographical, military and political considerations made each Confederate port unique, Wilmington, North Carolina provided an excellent opportunity for an archaeological and historical case study of Anglo-Confederate commerce. By the summer of 1863, the port of Wilmington became the most active center for blockade running in the Confederacy. Because of the nature and intensity of that activity, the historical and archaeological record associated with blockade running at Wilmington can be used as a model for defining the nature and scope of Anglo-Confederate commerce.

Some of the most important considerations in defining the nature and scope of Confederate blockade running were the limitations and constraints under which the United States Navy attempted to establish and maintain the blockade. One of the most important considerations was the failure of United States foreign policy. In spite of pressure from the United States, Great Britain recognized the belligerent status of the Confederacy. Queen Victoria's Proclamation of Neutrality and relaxed enforcement of regulations on Anglo-Confederate trade became the cornerstone of blockade running. The unrelenting U. S. diplomatic campaign to cut off the Confederacy from British merchants and manufacturers was largely unsuccessful. The persistence and initiative of Minister Charles F. Adams and the intelligence network that was developed around the United States Consular Service in Great Britain was undoubtably responsible for the objectives that were achieved. Without their efforts Confederate agents would, no doubt, have had a virtually free reign to operate in Britain and Europe.

When Lincoln declared a blockade of the Confederacy, the United States Navy was in a state of disarray. The number of vessels available for establishing a blockade was totally inadequate due to years of Congressional neglect and a primarily isolationist national defense policy that provided nominal support for the construction of coastal fortifications and little for the construction and maintenance of naval vessels. None of those available vessels were appropriate for the task of establishing and maintaining a blockade that would be effective against fast steamers.

The most important factor in the initial success of the U. S. Navy was the fact that the Confederacy placed an embargo on cotton and made no concerted effort to break the blockade. In fact, any early success of the Union blockade must be weighed in light of the Confederate policy on the exportation of cotton and, to a lesser degree, naval stores. The success of Confederate and state owned or operated blockade runners strongly suggests that had the Confederate Government initially adopted a plan for controlling or conducting blockade running, their program of foreign finance and economic assistance might have been considerably more successful and the home economy less subject to inflation.

In addition, many of the veteran officers in the U. S. Navy tendered their resignations to offer their services to newly formed state and Confederate Navy organizations. That left the United States Navy with serious personnel problems and lingering questions about the loyalty of many of those who chose to remain in that service. Distrust created an atmosphere of suspicion that was not overcome for years. Thus, the Navy Department was forced to build its fighting potential around a small corps of loyal officers and seamen. A massive enlistment program was initiated to recruit from the civilian population and, where at all possible, from the merchant marine. Frequently the wartime experience of the new officers and crew was gained at considerable expense to the United States Navy. The USS *Columbia*, USS *Peterhoff* and tugs *Aster* and *Violet*, four of the five U. S. Navy vessels lost on the Wilmington Station, were under the command of inexperienced officers from the merchant marine.

The massive purchasing program initiated to provide ships to establish and maintain the blockade was not without problems. Many of the merchant vessels purchased for the Navy were inadequate. Almost all required refitting to make them suitable for carrying ordnance and the purposes of war. In spite of what often involved extensive refits, many of the vessels procured by the Navy remained, like the USS *Daylight*, perpetual problems. Only a few were designed to resist the rigors of maintaining an extended station at sea. In addition to proving to be only marginally seaworthy, many suffered from equipment and machinery problems that kept them off station for repairs and on occasion seriously compromised the safety of the officers and crew. The logistics of maintaining steamers created perpetual problems at Wilmington and seriously undermined efforts to close that port. Communications of the officers and crew of the North Atlantic Blockade Squadron are filled with

complaints about the condition of their vessels and explanations for their being off station for coal or repairs when accounts of successful runs through the blockade reached Washington, D. C.

At Wilmington the effectiveness of the blockade was also compromised by the priorities of the Lincoln administration. Charleston, South Carolina was both the origin and the symbolic epicenter of the rebellion. Eliminating Confederate commerce at Charleston was at times more of a political obsession than a military priority. Charleston became a symbol of the rebellion and as such received an inordinate amount Union attention. A great deal of the Navy's meager resources were allocated to the South Atlantic Blockade Squadron to "punish" Charleston for its role in secession. Because Charleston was a very high political priority, Wilmington received little initial attention and the blockade there was only significantly reinforced during the last year of the rebellion in spite of the fact that by 1863 it had become the Confederacy's most important link with Europe.

Efforts to close the port of Wilmington were also undermined by the inability to make a decision concerning an amphibious assault and occupation of the Cape Fear. Union strategists maintained that the fall of Wilmington would seriously undermine the Confederacy's ability to procure war materials and could significantly shorten the war. Fortunately for the South, no decision was made until the fortifications defending the Cape Fear were highly developed and well armed. Those defenses provided the critical protection blockade runners needed to reach Wilmington by New and Old Inlet. In spite of recommendations of the Blockade Strategy Board's to capture Wilmington in 1861, the decision was not made and carried out until the rebellion had almost collapsed.

One of the most serious problems at Wilmington was the lack of an effective blockade strategy. At first that was dictated by the lack of resources available to close the two inlets to the Cape Fear. Initially, Union vessels maintained cordons just outside the range of Confederate artillery at New and Old Inlet. That created a very narrow window of opportunity to capture vessels attempting to run the blockade and proved to be only marginally effective. As additional steamers were assigned to the Cape Fear, an inner and outer cordon of vessels was established and the window of opportunity, although still limited, was expanded. However, it was not until fast steam vessels were available that the most effective strategy could be adopted. That strategy was to

maintain the two cordons in the proximity of each inlet and maintain fast cruisers offshore in the vicinity of preferred courses to Bermuda and Nassau. Those fast offshore vessels cruised along the projected tracks of ships that would clear Wilmington when environmental conditions were ideal and intercept them near daylight when success in a chase was more likely. Although speed remained the ultimate factor in a blockade runner's success, long chases increased the likelihood of more than one Union vessel becoming involved. That significantly reduced the chances of escape for even the fastest steamers.

Ultimately, even the most effective Union strategy failed to close the port of Wilmington. Blockade runners arrived safely in Wilmington after running through both the vessels of the North Atlantic Squadron and the massive fleet assembled to attack Fort Fisher in December 1864. While the risks of the trade increased as the blockade was strengthened and a more effective strategy was developed, only the capture and occupation of the Cape Fear defenses closed Wilmington.

Although the U. S. Navy found it impossible to close the Cape Fear, early Confederate economic and foreign policy almost eliminated commerce with Europe. A quasi-embargo on the exportation of cotton was the product of an unrealistic foreign policy. That policy was based on the assumption that withholding cotton from markets in Europe and Great Britain would motivate foreign powers to break the blockade and recognize the Confederacy. That policy virtually eliminated the South's commerce during the first year of the rebellion. Most of Wilmington's trade during that first year consisted of the exportation of naval stores. Those products were carried out of the Cape Fear in small coasting vessels that returned with cargoes of salt and produce.

When Confederate demand for war materials exceeded the supply in 1862, the cotton embargo was abandoned and the nature of blockade running changed dramatically. Initially, the pattern established by the *Fingal* was followed and war material was shipped from Great Britain and Europe in large, seaworthy, trans-oceanic steamers like the *Bermuda, Gladiator* and those of Z. C. Pearson and Company. The experience of Fraser, Trenholm and Company with the *Bermuda,* and *Gladiator* and that of Z. C. Pearson and Company with the *Settin, Patras, Lodona, Peterhoff* and *Modern Greece* prompted a change in the mechanics of blockade running. Fraser, Trenholm and Company devised a plan to use large steamers to transport goods to the neutral ports at Nassau,

Bermuda, Halifax and Havana. There the cargoes would be transferred to small fast steamers for the trip through the blockade at Charleston. By the fall of 1862, that pattern had been almost universally adopted by blockade runners.

When yellow fever and the blockade began to disrupt trade between Nassau and Charleston during the fall of 1862, the focus of activity began to shift to Bermuda and Wilmington. By the summer of 1863 when Union forces occupied the coastal islands southwest of Charleston Harbor, that South Carolina port city had become the most important link in the South's foreign trading network. Because of the massive Union force blockade running became too risky at Charleston, many of the civilian operations also shifted the primary focus their operations to Wilmington and Bermuda. Until January 1865, immediately prior to the collapse of the rebellion in April, Wilmington provided the most unrestricted opportunity for trade and communication with Europe and, more importantly, Great Britain.

Without question, the most important element in the success of Confederate blockade running was the lack of British enthusiasm for strict enforcement of regulations on Anglo-Confederate trade associated with Queen Victoria's Proclamation of Neutrality and recognition of belligerent status of the Confederacy. As frustrating as Confederate ministers found the unwillingness of Britain to recognize the "nation status" of the Confederacy or intervene in the conflict, their relaxed attitude towards Anglo-Confederate trade was the key to both military procurement and civilian blockade running.

Traditional economic and social ties between Great Britain and the American South were, if anything, strengthened during the rebellion. That was particularly true in cities like Liverpool, Manchester and Glasgow where the exchange of cotton for manufactured goods and the construction of ships had a major impact on the economy. In those areas sentiment was frequently and openly in support of the South. The historical and archaeological evidence associated with the cargoes of blockade runners clearly indicates that British manufacturers, agents of the Crown, and merchants were willing to work within the system to supply Confederate military and civilian needs. Without that support, blockade running would have only existed on the most superficial scale.

British and Confederate merchants and speculators were willing to take certain risks in dealing with the Confederate Government and trading with the South. While there was considerable Confederate sentiment in Great Britain,

the high profits generated by success in blockade running no doubt enticed many individuals and firms into associations with Confederate agents and their British representatives. Joint venture and other investment prospectus literature confirms that expectations for a high return on investments were anticipated. The financial scenarios projected by the Atlantic Trading Company and the high price of stock in organizations like the Steamship *Pet* Company confirm that the risks were considered acceptable even until the rebellion collapsed. In Great Britain, the prospects of high investment return even attracted members of Parliament like John Lindsay and Thomas Conolly and the mayors of cities like Liverpool and Hull.

Without the indifference, if not the cooperation, of British agents and the active support of British merchants and manufacturers there would have been virtually no base of support for the trade that maintained the Confederacy. Had British neutrality been strictly enforced, ordnance manufacturers such as Whitworth and Armstrong would have been unable to supply the South with the rifled cannon and ammunition that contributed so significantly to the defense of Wilmington and protection of the salvage activities associated with beached blockade runners. Thousands of small arms and accoutrements such as the Enfield rifles shipped on *Fingal, Bermuda* and found on the *Modern Greece* would never have reached the Confederate soldier.

As a consequence of the blockade running activity focused at Wilmington, the shallow Atlantic waters of the Cape Fear contain the remains of more than thirty steam powered blockade runners. Location, identification and investigation of eighteen of those wrecks has generated new data on blockade running and the vessels that supported the trade. Identification of the wrecks was accomplished using a combination of both historical and archaeological data. Most were identified on the basis of their location and comparison of the specifications for machinery and hull structure preserved at the site with those data preserved in the historical record. Research associated with the remains of those vessels has also identified avenues of additional archaeological and historical research.

Although the initial investigation of one of the blockade runners can only be described as salvage, that project stimulated interest in the entire spectrum of blockade runners. Work on the *Modern Greece* generated little information about the nature of surviving vessel remains but, produced the most comprehensive collection of material to be recovered from a blockade

runner. Documentation of that important collection afforded the first insight into the specific nature of the material shipped through the blockade. The amount of material recovered from the *Modern Greece* suggested that other wrecks could contain extensive cargo inventories.

Subsequent examination of additional wrecks indicates that may well not be the case. Of the remaining seventeen shipwrecks that have been examined, none have been found to contain the amount of cargo preserved on the *Modern Greece*. In fact, evidence from those sites suggests that the amount of cargo surviving in association with the hull remains could be marginal by comparison. Although several of the wrecks were found to be heavily covered by sand, the remains of the *Ranger, Ella, Condor, Stormy Petrel, Lynx, Hebe, Wild Dayrell* and *Phantom* were exposed enough to determine that only limited very amounts of cargo remain at the wreck site.

The *Modern Greece* could be an exception rather than the rule concerning cargo. The spatial distribution of the wrecks suggests that where possible, the vessels were run aground under the protection of Confederate batteries. That permitted the wreck to be protected by artillery while army units, black laborers and the ship's officers and crew attempted to salvage the cargo. Both the archaeological and historical record confirm that Confederate salvage activity was highly successful. Historical and archaeological research associated with the *Ranger, Ella, Condor, Stormy Petrel, Lynx, Hebe, Wild Dayrell* and *Phantom* illustrate that effectiveness. Although little evidence of associated cargo was found on eight of the other identified blockade runners, it is possible that the heavily sanded sites and those yet to be located and identified could contain concentrations of material similar to that found on the *Modern Greece*.

While the wrecks may not prove to be the most comprehensive source of cargo information, they do preserve valuable information concerning the hull and machinery. Examination of the eighteen wrecks in North Carolina and two additional sites in Bermuda suggests that the hulls had a characteristic sequence of breaking up. The structural remains of virtually every wreck was found to have very similar surviving hull characteristics. Forward of the watertight bulkhead at the forward end of the forward cargo hold the bow section remained virtually intact although each one was found to list heavily to starboard or port.

The forward cargo hold proved to be intact below the turn of the bilge and the sides of the hull and deck beams were scattered across and outside the hold. The engineering space, perhaps the most strongly constructed section of the hull, almost inevitably survived to a point above the turn of the bilge and contained the remains of the boilers and machinery. Because of their substantial construction, boilers were generally found in excellent condition unless an effort had been made to destroy them. Machinery, like the boilers, was of heavy construction and was found to survive in a generally excellent state of preservation. Exceptions were generally almost always related to historically documented efforts to destroy the vessel or subsequent salvage activity.

Like the hull structure associated with the forward cargo hold, that associated with the aft cargo hold was inevitably found to have collapsed to the turn of the bilge. The sides of the hull and deck beams were scattered across and outside of the bottom of the hull. Aft of the aft hold the hulls were universally found to have broken at the location of the aft cargo hold bulkhead. The stern on most was well preserved and virtually intact below the fantail. In most cases the fantail itself was intact, but had broken away from the hull beneath it and lay close by on the sea bed. That pattern is surprisingly consistent throughout the vessels examined.

Examination and documentation of the hull remains of blockade runners confirmed that iron and steel vessel construction was closely regulated. Materials employed in building the ships were highly standardized as uniformity was the backbone of the industrial process. Patterns of framing and plating were a factor of both the industrial nature of construction material production and design criteria spelled out by the insurance industry. Scantling dimensions and configuration within the hull had to meet highly specific design criteria identified by the insurance underwriters. A comparison of the iron ship survey data for the steamer *Modern Greece, Peterhoff, Scotia, Douro, Don* and *Hebe* confirmed the strict adherence to those requirements. An examination of the contemporary documentation concerning the design and construction of iron and steel vessels confirmed the standardized nature of material and design criteria.

Although this research suggests that much of the material and construction data for iron steamers such as those employed to run the blockade can be found in historical sources, data concerning the actual configuration of

each individual hull may only be preserved at the wreck site. Only a few plans for blockade runners are known to survive. Those consist of the *Phantom, Ella* and sister ship *Annie,* the *Will of the Wisp* and sistership *Julia,* the *Hope, Stormy Petrel* and sistership *Mary Bowers,* the *Dare* and sistership *Fergus* and the *Emily.* Additional information on hull configuration can be found in the builders models of the *Dare, Colonel Lamb, Denbigh, Kelpie, Neptune, Iona I, Tubal Cain, Juno, Rothsay Castle, Mail, Alliance, Rosine* and a few others. With those exceptions, information on the configuration of blockade runner hull forms can only come from reconstruction of the structural remains of the vessels themselves.

While those data comprise one of the most important attributes of a wreck site, the present condition of most hulls makes documentation and reconstruction a difficult, expensive and time-consuming task. In considering the condition of the wrecks examined by the author, the most effective approach to recovery and reconstruction of those data would appear to be to focus on recording and documentation on the bow and stern where lines are most complex and structural preservation the best. Additional documentation could consist of sections of the wreck taken at the watertight bulkheads and engine room. That level of recording should provide sufficient data to permit a reasonable reconstruction of the hull form.

One of the most valuable assets of the wrecks of blockade runners is the steam machinery. Although patent data and contemporary engineering publications provide excellent documentation for the types of engines employed in blockade runners, machinery was often unique to the specific vessel. While the type of oscillating engines that were most commonly employed in the trade were all of a similar general configuration and function, each had its unique dimensions, configuration and associated assembly of air and water pumps, condensers and vibration dampers. Other types of machinery like the compound engines aboard the *Modern Greece* and *Peterhoff* and the horizontal direct acting engines of the *Hebe, Dee* and *Vesta* represent early configurations that merit additional highly specific documentation. Both of those machinery types had an impact on the evolution of steam technology in the nineteenth century.

Like steam machinery, marine boilers were produced in a variety of designs. The remains of blockade runners also preserve an important and varied collection of marine boilers. While most boilers represent the return

fire tube box type with a square steam collector like those of the *Bendigo, Wild Dayrell, Ranger, Nola* and *Mary Celestia*, others proved to be more unique. The boilers of the *Condor*, for example, are perhaps the most unusual design and represent a "haystack" configuration developed by John Elder and employed in the *Falcon, Flamingo, Condor* and *Ptarmigan*. The boilers of the *Hebe* represent the box design without the steam collector and were constructed as a mirrored pair with a common flue. Those of the *Stormy Petrel* were designed as horizontal cylinders mounted in tandem and connected by a common flue. That type evolved into the high pressure "Scotch" boilers that became one of the most common designs of the late-nineteenth century. Many of the boilers of blockade runners like those of the *Peterhoff* and *Stormy Petrel* were fitted with superheaters to dry and increase the temperature of the steam.

Blockade running would have also been impossible without the fast steam vessels available from Britain. Those vessels provided the technology required to circumvent the blockade. Had the British adopted a strict neutrality those vessels would not have been so readily available to support the trade.

While the wrecks preserve an important record of evolving steam technology, historical and archaeological data confirms that vessel design characteristics most frequently employed in blockade running reflected previously developed innovations. Vessel hulls were designed to conform to models that had been developed over more than a half century of iron construction. The mechanics of constructing the hull and material employed in the framing and plating were highly regimented and tightly controlled by underwriters. Design characteristics were functions of both designer and customer preferences and theories of hydrodynamics such as the wave form theory associated with length, beam and depth ratios and speed. Many of the guiding principals of iron ship design and building had been developed by the Scottish scientist, engineer and shipbuilder Scott Russell during the second quarter of the nineteenth century.[1]

Fast, seaworthy and efficient hull forms had been a preoccupation with British ship designers and builders for more than two decades when the South attempted to secede from the Union. Successful competition among the public steamship lines that developed on the major rivers and to provide rapid reliable transportation between England, Scotland and Ireland or England and

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[1]Sidney Pollard and Paul Robertson, *The British Shipbuilding Industry 1870-1914.*, Harvard University Press, Cambridge, Massachusetts, 1979, p. 15.

the Continent was based in large part on speed. British-built steamers were the fastest, most comfortable and reliable in the world. When those vessels built for the public transport services were nearly all purchased for blockade running, new blockade runners were built along the same general lines. Many of the technological innovations that had been a product of that competition were adopted to produce a successful blockade runner.

Hull forms were produced with extreme length to beam and depth of hold ratios. Prior to the war in America steamers built for the public transport services had evolved with excessive length to beam ratios. That was in part a factor of the limitations of the machinery, particularly the length of the paddle wheel shaft, and the fact that hulls had to be designed to ensure that the paddle wheels would not end up in one of the troughs created by the wake. Side wheel steamers like the *Dolphin*, 1844; *Scotia*, 1847; *Herald*, 1853; *Ruby*, 1854; *Hansa*, 1858; *Havelock*, 1858; *Iona*, 1858 and *Giraffe*, 1860, ranged in length to beam ratio from the *Scotia*'s 7 to 1 to the *Iona*'s extreme 11.25 to 1. *Ruby*, *Herald* and *Giraffe* were all built with 10 to 1 length to beam ratios and the *Dolphin*, *Hansa* and *Havelock* had ratios of 8 to 1. Although purpose-built vessels varied considerably, their length to beam ratios reflected the traditions established by the construction of vessels for the public transport services.

Vessel	Year Built	Length	Beam	Depth of Hold	Ratio
Dolphin	1844	170	21	10.5	8 to 1
Scotia	1847	202	28.5	13.5	7 to 1
Herald	1853	222	22	14.5	10 to 1
Rudy	1854	177	17	8.3	10 to 1
Spunkie	1857	191	18	7.5	10.6 to 1
Hansa	1858	177	22		8 to 1
Havelock	1858	223	26	14	8.6 to 1
Cornubia	1858	190	24	12.5	7.9 to 1
Iona	1855	225	20	9	11.25 to 1
Giraffe	1860	268	26	12	10.3 to 1

Likewise, the ratio between length between perpendiculars and length of engineering space and tonnage and tonnage allocated for machinery illustrate that when speed was a prerequisite, the ratio was high.

A few hull configuration characteristics could represent modifications designed to adapt vessel designs for operations in the shallow inlets of the southeastern Atlantic coastal waters. Vessels like the *Don, Venus, Ella, Hope* and *Stormy Petrel* were constructed with almost no deadrise and no external keel. That lack of deadrise would contribute to reducing draft and a keelless hull configuration with a cut away forefoot would facilitate grounding and getting off with minimal damage. Hulls of some of the blockade runners like the *Hope, Ella* and *Stormy Petrel* were equipped with forecastle hoods or turtle backs that helped punch through the seas and shed water off the foredeck. The forecastle hood was developed for use on small steamers operating on the Irish Sea and were adopted by blockade runners operating in the Atlantic between Nassau, Bermuda, Halifax and Confederate ports.

Blockade runners employed a wide variety of steam power plants. Early trans-oceanic steamers like the *Bermuda, Princess Royal, Modern Greece* and *Peterhoff* were fitted with advanced direct acting vertical cylinder compound engines that were first developed by Charles Randolph and John Elder in 1853. Compound engines were the most efficient and would later become the standard among oceanic steam cargo vessels.[2] Others like the American built *Kate* and *Elizabeth* and the Canadian built *Arabian* were fitted with walking beam engines similar to those designed by Robert L. Stevens in 1822. Although the walking beam engine was highly popular in America, it was not widely employed in Great Britain. The *Douro,* a British built cross channel steamer, was equipped with geared steeple engines and the Dudgeon twin screw vessels were equipped with twin horizontal cylinder direct acting engines for each shaft. The *General Beaureguard (Havelock)* and *Antonica (Herald)* were both fitted with side lever engines perfected by the Napiers of Glasgow in the 1850s. Side lever engines had been the most common power plant for side wheel steamers until the development of highly reliable oscillating engines.

The arch typical side wheel blockade runner was powered by twin oscillating engines. The oscillating engine had been invented around 1785, but was not perfected for steamers until John Penn and Son of Greenwich and Maudslay & Field of London began to build that type of machinery during the 1830s and 1840s. Most of the fast sidewheel steamers built for blockade running

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[2]*Ibid.*

were equipped with that configuration of steam machinery. Wrecks of the *Condor, Wild Dayrell, Stormy Petrel, Ranger, Lynx, Fanny & Jenny* and *Venus* all contain the remains of oscillating engines.

Virtually all of the fast public service side wheel steamers purchased to run the blockade and those side wheel steamers purpose-built to run the blockade were equipped with paddle wheels fitted with feathering buckets. That design was patented as early as 1829 by Elijah Galloway and was developed to improve efficiency.[3] Although complicated, by the time of the American Civil War feathering floats were reliable, more efficient than wheels with radial floats and by 1858 John Elder was building them of iron with a concave surface. The remains of the *Condor*, one of John Elder's vessels, was equipped with feathering iron floats.

Speed was one of the most important criteria for a blockade runner and paddle wheel vessels achieved the highest recorded speeds. While vessels that could make speeds of fourteen knots often proved to be successful, most purpose-built blockade runners were designed to achieve speeds of sixteen to eighteen knots on their trials. The fastest vessels were able to accomplish a remarkable speed of nineteen knots.

However the vessels that attracted the most professional and public attention were not the ones that posted the fastest speeds. They were the twin screw steamers built by John and William Dudgeon of London. When the *Flora* was launched in 1862, she was not the first twin screw vessel. In the United States, John Ericsson had built several successful twin screw vessels in the 1840s. In Great Britain, Richard Roberts had explored the concept of twin screw vessels in print in 1853 and the Dudgeons had constructed the machinery for a small twin screw tugboat in 1857. The idea of the twin screw was not novel, but functional systems were rare and *Flora* and several sister ships became the object of both experiment and debate. While the speed, compared to the fastest paddle steamers was not impressive, it was a surprise when compared with the horsepower and efficiency of the engines. Perhaps the most important issues illuminated by the trials of the *Flora* were the steering and maneuverability of twin screw vessels. Unparalleled maneuverability and

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[3]David K. Brown, *Paddle Warships*, Conway Press, 1993, p. 71 and Robert Gardiner, *The Advent of Steam*, Conway Press, 1993, p. 17.

reasonable speed, approximately 15 knots, made the Dudgeon twin screw vessels successful blockade runners. One significant advantage of the screw over the paddle wheel was the quiet operation of the screw.

A variety of boiler types were employed in blockade runners. Because the insurance underwriters limited pressure to 25 pounds most were equipped with low pressure systems based on the return fire tube box design with a square steam dome. Boilers on the *Wild Dayrell, Ranger, Ella, Nola* and *Mary Celestia* were of that type. The *Stormy Petrel* was equipped with horizontal tubular "Scotch" boilers and the *Condor* was fitted with three vertical fire tube "haystack" boilers. Boilers on the *Hebe* were of the box design without a steam dome and fitted with a common flue. Only the boilers of the *Stormy Petrel* represented the state of the art in design and construction at the time of the American Civil War.

Many of the vessels running the blockade were equipped with retractable smoke pipes. While not developed in response to the demands of blockade running, retractable smoke pipes were employed to reduce the visible profile of vessels. Smoke pipes could be raised at sea to improve draft and lowered when running through the Union blockade. On some vessels like the *Aries*, masts were designed and constructed to be lowered to reduce the vessel's visible profile.

British neutrality and the availability of fast vessels was not in itself sufficient to ensure the success of blockade running. The geography of the Cape Fear also proved to be a critical factor. The Cape Fear River emptied into the Atlantic Ocean through two navigable inlets separated by Smith Island. Ready access to two inlets offered blockade runners an important option and greatly complicated Union efforts to eliminate Wilmington's commerce. To protect those entrances to the Cape Fear River, the Confederacy constructed a series of powerful fortifications. During the course of the war that protection proved to be one of the most critical elements in successfully trading through the blockade. The construction and arming of the fortifications at New and Old inlets forced vessels on the blockade to maintain stations and break off their pursuit of blockade runners at a respectable distance from each inlet. That protection provided blockade runners with a "pocket" of protection at the inlet where navigation was most critical.

As the war progressed the Confederate system of fortifications was expanded to include smaller forts on Smith Island, Zeek's Island, west of Fort Caswell on Long Island and north of Fort Fisher on the beach as far away as Myrtle Grove Sound. The availability of highly accurate long range Whitworth field artillery permitted Confederates to greatly extend the range of their protection for steamers run ashore by Union vessels on the blockade. Almost every blockade runner chased ashore received sufficient protection from the forts, batteries or field artillery to permit salvage of some portion of the cargo. By 1863, the complex of fortifications and batteries were so well developed and armed that Union vessels were required to attempt to intercept blockade runners at considerable distance from the inlets.

The increased number of vessels assigned to the Wilmington Station and employment of steamers brought a corresponding shift in the strategy of blockade running. Rather than running directly in through the blockade on a schedule that placed the blockade runner in the vicinity of the inlet and under the protection of Confederate artillery at daylight, vessels began to make landfall north of Fort Fisher or west of Fort Caswell at night and run along the beach. Once under the protection of Confederate artillery, blockade runners could anchor near the inlet until daylight and/or tides permitted a safe passage over the bar.

The lack of success of large trans-oceanic steamers and the ability to trans-ship cargoes caused a dramatic change in the business in 1862. Small fast steamers began to operate out of Nassau, Bermuda and occasionally Havana and Halifax. From those neutral ports they carried goods brought from Great Britain in sailing ships and large cargo steamers through the blockade. Initially most of those steamers were bought from companies that provided fast public transport and mail service in Great Britain. After that supply was exhausted, new vessels were built along their lines specifically to run the blockade. Those vessels provided the speed necessary to make blockade running successful.

By 1862, the appearance of steamers running the blockade were being altered to make detection more difficult. Although most left Great Britain with a traditional paint scheme to avoid the suggestion that the vessel was to be employed in running the blockade, they received a coat of white or gray paint at Nassau or Bermuda. White or gray paint tended to blend with the surf at night and make the vessel difficult to detect. When white and gray blockade runners got in "under the land" they became almost impossible to identify. To make

identification more difficult some vessels were equipped with retractable smoke pipes and masts that were only marginal or could be lowered to the deck. Running along the shoreline also disguised the noise of the vessel with the sound of the surf.

To increase the chances of not being observed, blockade runners scheduled their voyages to arrive off the Cape Fear on moonless nights. That made running along the shoreline and navigation of the inlets even more dangerous. To minimize that danger Confederates established a system of signal lights. After a blockade runner was identified by displaying lights on the inshore side of the vessel a series of range lights were lit on towers along the beach. Range lights were located to identify the channel across the bar for vessels running in and out of both New and Old Inlet. Light signals were also used to let the forts and batteries know that a vessel was attempting to run in so that covering fire could be provided if necessary. Communications between blockade runners and the garrisons of the coastal fortifications were greatly improved when Confederate Signal Corps officers were assigned to each vessel.

The success of blockade runners ensured a supply of both war materials and civilian manufactured goods for the Confederacy. Although Bermuda Customs records provided a preliminary indication of the nature of material being shipped into the Confederacy, it was immediately apparent that those records had been designed to disguise material that might be in violation of British neutrality. Bermuda Customs officers employed such vague terms as "General Merchandize", "Manufactured Goods" and "Assorted Material" to ensure that the activities of Confederate agents and Anglo-Confederate merchants were not interrupted.

When the cargo of the *Modern Greece* was salvaged during the 1960s, the artifact collection illuminated the real nature of a blockade runners cargo. That assemblage of more than ten thousand artifacts included ordnance, arms, weapons, war material and a cargo of tools, household utensils, hardware and spirits for the civilian market. Although salvage of the *Modern Greece* suggested that investigation of the remains of other blockade runners would produce collections of equally revealing material, that has not proven to be the case.

In fact the remains of additional vessels that have been identified and examined suggest that the *Modern Greece* could be relatively unique. An examination of the historical records associated with blockade running

indicates that the Confederates were very adapt at salvaging the cargo of vessels run ashore. The geographical distribution of the remains of blockade runners suggests that running vessels aground under the protection of Confederate artillery was considered a viable option and the salvage value of the cargo could be sufficient to cover the loss of the vessel.

While examination of the remains of eighteen of the steam powered blockade runners lost on the North Carolina coast supports the theory that extensive cargoes may well not exist in association with the remains of blockade runners, the corresponding historical research has identified a valuable and previously untapped source of information concerning those cargoes. That source is the United States Prize Court records preserved in regional repositories of the National Archives. Records, preserved at Waltham, Massachusetts; Bayonne, New Jersey; Philadelphia, Pennsylvania; Washington, D. C.; and Atlanta, Georgia contain a wealth of very specific information.

Each vessel turned over to the Boston, New York, Philadelphia, Washington or Key West Prize Court was surveyed and an inventory of the cargo recorded. Those records proved to be both comprehensive and extremely detailed. Material identified as "General Merchandize" or by other deliberately vague descriptions was specifically inventoried. Material in the *Bermuda* inventory was identified by type and sometimes by manufacturer. The cargo of the *Banshee* contained cases that were not only opened and the contents inventoried but, on more than one occasion the consignee was identified. Using a computer and the data preserved in those records, manifests from the Bermuda Archives and information preserved in the U. S. Consular dispatches from British ports, the plethora of shipping marks preserved in those records might be identified and cataloged.

The evidence examined to date illustrates that there were three distinct patterns for the cargoes. Early in the rebellion the Confederate embargo on cotton served as an effective stumbling block. It eliminated foreign access to the South's most valuable export and curbed interest in putting expensive steam powered vessels at risk to trade through the blockade. Initially blockade running at Wilmington was carried out by small sailing vessels that carried in cargoes of salt and provisions and carried out cargoes of naval stores. The

example set by the *Fingal* and *Bermuda* demonstrated the effectiveness of steamers, the value of cargoes of war materials in the South and the profits to be realized from cotton run through the blockade.

When the Confederacy discontinued the cotton embargo in 1862, British and Confederate merchants and ship owners were more than willing to risk their vessels in trading through the blockade. Until the passage of laws and regulations early in 1864, blockade running was for the most part unrestricted. With the exception of vessels owned and or operated by the Confederacy or individual states, vessels were owned and operated by civilian firms. Those vessels carried cargoes that consisted of both military and civilian goods. Military cargoes were shipped at exorbitant freight rates and civilian material was selected to command the highest prices. Huge profits were made in spite of the risks involved in the trade.

Because the system crippled the government's efforts to obtain supplies and war materials and contributed to uncontrolled inflation, the Confederate Congress passed laws giving President Davis authority to control the South's foreign commerce. After the promulgation of regulations by Jefferson Davis, the nature of cargoes changed dramatically. Inventories of vessels captured after March 1864, contain only a limited amount of material considered to be contraband by the Confederate Government. In fact, the inventories suggest that cotton was so valuable that vessels could afford to run into the Confederacy with little more than the cargo consigned by the government and still make a massive profit on the cargo of cotton taken out on the return to Nassau or Bermuda. That hypothesis is supported by the value of the cotton carried out by vessels such as the steamers *Memphis, Greyhound* and *Tristram Shandy*.

In the final analysis it appears that Anglo-Confederate blockade running is a rich and fertile area for additional research. The research associated with wrecks that have been identified and investigated demonstrates that additional archaeological and historical research could produce an even better understanding of the trade. Location, identification and investigation of the wrecks of the remaining twelve blockade runners known to have been lost on the coast of North Carolina would provide an opportunity to examine the entire spectrum of shipwrecks associated with the trade.

A more comprehensive program of site testing could generate more conclusive data concerning the machinery and hull forms that were employed. That research could also identify wrecks containing unsalvaged cargo. Testing could focus on a selection of wrecks representing early coastal steamers like the *Kate* or *Elizabeth,* trans-oceanic vessels like the *Modern Greece,* fast steamers built for the British public transport services like the *Havelock, Herald* or *Scotia,* and purpose-built blockade runners like the *Hebe, Venus* or *Ranger.* Testing could be designed to identify and assess any remaining cargo and collect sufficient data to accurately reconstruct the boilers, machinery and hull form. Reconstructions could be effectively developed using computer assisted design programs and hull forms could be generated using programs developed to support vessel design and assessment.

One of the most productive areas of additional research appears to be the Prize Court records. Records examined in conjunction with this research revealed that they contain the most comprehensive known inventory of cargos associated with blockade runners. A thorough analysis of those data could produce an important picture of the material shipped through the blockade. In addition, a survey of shipper's marks documented in the Prize Court, Bermuda Customs, British Customs and U. S. Consular records could tie material to specific individuals, firms and Confederate or state agencies. Those data would be invaluable in the event that a largely unsalvaged cargo is discovered.

The model of blockade running documented at Wilmington is no doubt unique. However, the efforts of the United States Navy to close that port and those of the blockade runners to circumvent the blockade to a great degree reflect the activities that occurred at other Confederate port cities where the associated historical record is not so comprehensive and the archaeological record has not been as thoroughly investigated. By combining additional evidence from both the historical and archaeological record, a more detailed picture of the clandestine trade that supported the Confederacy has been developed and several productive avenues of additional research have been identified.

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